

ELEMENTS

OF

INTELLECTUAL

PHILOSOPHY

REV. J. DE BONALDE

THE
ELEMENTS
OF
INTELLECTUAL PHILOSOPHY.

BY

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Author of "Catholicity and Pantheism," "Knowledge of Mary," etc.

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"How charming is divine philosophy!
Not harsh and crabbed, as dull fools suppose;
But musical as is Apollo's lute,
And a perpetual feast of nectar'd sweets,
Where no crude surfeit reigns."

—MILTON'S *Comus*.

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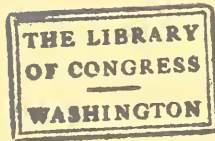
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ERRATA—CORRIGE.

Page 249.—For “superior,” twenty-fifth line, eighth word, read *inferior* :
“ It must be the substance of the inferior nature,” etc.

Page 262.—For “inferior,” first line, third word, read *superior* : “ It would
produce an effect superior to its cause.”

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PREFACE.

THE author who should attempt to write a book on the elements of intellectual philosophy should in our opinion strictly attend to, and be guided by, the following principles, which have reference to the language, to the style, and to the matter of the book.

I. The book should be written in English. The matter treated of in philosophy is hard enough to understand, even by the brightest intellect which just comes from the study of *belles-lettres*, fascinated by the matchless beauties of the ancients clothed in the finest language, to undertake to master hard, dry things, without flesh and blood, but abstract and immaterial. Now, to present such things in a foreign language is to render the difficulty of apprehending them unnecessarily greater, and to heighten the aversion which young minds naturally feel for abstract ideas. It is like covering a beautiful painting with a double veil. For language, after all, is a veil which covers the idea. Now, if you clothe an idea in language foreign to the student, no matter how well he may be supposed to know it, you oblige him, in order to look at the idea, first to uncover

the veil of the foreign language to make room for the veil of his own native language, and then to catch the idea. In other words, you oblige the student first to translate into his own language, and then to grasp the matter. In the second place, to write a book on the elements of philosophy in the Latin language is to confine the study of this most necessary science only to those who have gone through a classical course; whereas we know by sad experience how necessary and how important it is for all our young men to be imbued with proper, true philosophical principles, to the absence of which we may attribute all the errors and evils which afflict society.

With regard to the style, of course it must be of a didactic nature—that is, brief and concise, but above all perfectly clear. Nor would we be averse now and then, when the occasion presents itself, from changing the nature of the style for one a little more pleasing and attractive, so as to lighten the difficulty and mix the useful with the sweet.

Finally, with regard to the matter, a book of elementary philosophy should contain nothing but the doctrine received by the best and greatest of Christian schools, the doctrine most received in the Church, that upon which the Holy See has always looked upon with marked and never-ceasing partiality.

These are the principles which have guided us in writing these *Elements of Intellectual Philosophy*.

As to the language, not only have we written it in English, but we have been most chary and particular in our choice. Whenever we had two words to choose from, we always preferred that which was the easiest of comprehension and of Anglo-Saxon origin. We have thought proper to discard, whenever it was possible, all words which may remind one too much of the schools, always translating into the best English we could muster, anything of such a nature; so that in reading our *Elements* the young student will meet with no hard word which may require the use of the dictionary, or which may stop him in his endeavor to catch the idea.

With regard to the style, it has been our constant effort to make it as clear as possible, at the same time that we have tried to be brief. There is hardly a theory laid down which is not illustrated by one or more examples. And we venture to assert that owing to this lucidity of style our *Elements* could be studied, and in great part understood, without a teacher by any young man of parts. We have also, whenever we possibly could, tried to illustrate our theories by quotations from the poets, to loosen the tension of the mind by something pleasing and interesting. At the end of *Ontology* we have shown by an abstract of all the natural sciences how they are an application of the principles of *Ontology*.

With regard to the matter, we have followed throughout the philosophy of the "Angel of the Schools," in which we were brought up from our youth,

and from which we have never swerved in our manhood, experience and more profound studies having led us to adhere to that philosophy more tenaciously and more ardently. Every one knows that all modern errors have originated in the abandonment of Catholic philosophy as embodied in the Catholic schools, and especially in that of St. Thomas. Consequently the only way to put a barrier to these errors, to refute them, is to turn back to that grand philosophy created by geniuses as great as Plato or Aristotle, and guided by the truth of God, which those heathen geniuses had not.

Of course, these being only elements, we have used a great moderation in the treating of all the questions connected with this science; yet it will be found that no single important question has been omitted of which it is necessary for the student to know something.

Besides the usual parts, our *Elements* will close with a book on the external and internal evidences of Christianity as a complement of this science—that is to say, we shall in an elementary way, and without going too deeply into the matter, show the philosophical force of the proofs of the divinity of Christian revelation.

All this we have attempted to do. But have we succeeded? No effort on our part has been or will be spared to make this book come nearer to these principles we laid down for our guidance. As for the rest, it is not for us to pronounce judgment,

but others, and especially for the learned professors of this study scattered throughout the land, from whom we shall thankfully receive any suggestion or correction which they shall see fit to make.

At present only Logic, Ontology, and the first part of Anthropology are published. Next year, if God gives us strength, we shall publish the rest.

JERSEY CITY, FEAST OF SS. PETER AND PAUL.

ELEMENTS OF INTELLECTUAL PHILOSOPHY.

INTRODUCTION TO PHILOSOPHY.

ARTICLE I.

DEFINITION OF PHILOSOPHY.

Q. What is the meaning of the word philosophy?

A. It means love of wisdom, and a philosopher is a lover of wisdom. This word was used for the first time by Pythagoras, who, on being asked what art he professed, answered that he was a philosopher.

Q. What did the ancients mean by the science of philosophy?

A. They meant the knowledge of everything. This could well be in olden times, when, sciences being in their infancy, all human knowledge could be collected into one science. In this sense philosophy was defined by Cicero *the science of all human and divine things and of their causes.*

Q. Does it embrace the same objects now?

A. Sciences being so much developed in our times, it would be utterly impossible to comprehend them all in one. Hence they have been divided, a particular object being set apart for each one; therefore the object of philosophy has been also narrowed down.

Q. Explain the object of philosophy.

A. The better to do so we will premise a few remarks.

1st. Science consists in understanding the principles from which a thing is derived: *Scire res per causas*—to know things by their causes.

2d. There are two kinds of knowledge, common and scientific. The first is satisfied with merely knowing the existence of a thing; the second goes beyond that, and is not content with merely apprehending the existence of a thing, but wants to find out why the thing is so and not otherwise, and what is the principle which causes it.

For instance, who had not seen, from the time of the first man who made a lamp and suspended it to the wall of his cottage or to the roof, that when first hung in its place it oscillated for some time from side to side until at length it came to a perpendicular? Men before Galileo perceived this fact, and passed on without seeing anything more in it. This is common knowledge. One day Galileo, observing this very fact, and noticing by more accurate observations that the oscillations were regular, perceived in this fact the principles of the law of gravitation and motion, and invented the pendulum. This is scientific knowledge.

3d. We remark that all the sciences, though distinct and different from each other according to their different objects, are yet connected together by the necessary fact of the dependence of one upon the other. For particular sciences depend upon those which are less so, and these in their turn upon those which are more general. Chemistry, for instance, is the science of the elements of bodies and of their properties, but it could not exist without another less particular science which must precede it, called physics. This latter science, which treats of the phenomena of bodies and their causes, could not exist without an-

other science more general which treats of the nature and properties of bodies and of all the material world, together with their causes, and which is called cosmology. But the world is a being, an existence, and therefore it could not be properly understood without the science of *being in general*, its *properties* and *causes*, which is called ontology. We conclude, therefore, that, as every particular science depends upon another science less particular and more general, there must be a science which investigates the most common principles of being, and which depends on no other, but on which all others depend. This science is philosophy. The objects, therefore, of philosophy are the most common principles of being.

Q. What do you mean by the most common principles of being ?

A. As St. Thomas has remarked, the most common principles of being are the *first* and *supreme* principles, beyond which there can be no other. Thus the last end, being common to all beings, is also the first and supreme end ; the most common cause, being that from which all things are originated, is the first cause, upon which every other cause depends ; the idea of being, as it is the most common idea and the simplest, is also the first idea, on which all others depend and from which all others originate. Therefore by the most common principles are meant the first and supreme principles, from which everything proceeds and draws its existence. And because principles of this kind are not the property of this or that particular being, but of all beings in general, it follows that the objects of philosophy are the supreme principles of everything, and not of this or that particular thing.

Q. Give the definition of philosophy according to the preceding remarks.

A. Philosophy is *that science which investigates the first and supreme principles of being.*

It is called *science* because it investigates principles and cause, and therefore is a knowledge of an object by its causes.

Of the first and supreme principles, because the other sciences investigate this or that principle and cause; philosophy only investigates the supreme and highest principles.

Of being, because philosophy does not take as its object any particular thing, but whatever comes under the denomination of being.

ARTICLE II.

DIVISION OF PHILOSOPHY.

Q. How is philosophy divided?

A. The objects of philosophy are the supreme principles of being. Therefore the parts of this science must be as many as there are natural divisions or parts of being. Now, being may be divided into three parts, *rational*, *real*, and *moral*. The rational is that which exists only in the mind as its own work. The real is that which has true existence outside and independent of us. The moral is that which originates in the will of man in its relation with moral law. The rational is called *logic*, and has for its object the order which our mind puts in its ideas. The moral is the science of *ethics*, and treats of the free actions of men as directed and guided by moral law. The real is called *metaphysics*, and is subdivided into three parts, because, as St. Thomas observes, real being may be classified under four heads. It may be either material or separated from matter. If separated from matter, this may proceed from

two causes. It may be separated from matter, not because it is so in reality, but because our mind, in considering a material object, may choose to leave aside the material part of it, and fix its attention only on the interior nature of the thing, which operation of the mind, as we shall see, is called abstraction, and the thing thus obtained an abstract; or it may be separated from matter because it is so in reality, as spiritual substances, of which there are two, *God* and the *human soul*. The objects of metaphysics are, therefore, the *material being*, the abstract being, the soul, and God. Hence there are four parts of philosophy—cosmology, which treats of the material world; ontology, which speaks of being in common and in the abstract; anthropology, which treats of man, and of the human soul especially; and theology, which treats of God as he can be known from reason.

ARTICLE III.

USE OF PHILOSOPHY; OR, ITS CONNECTION WITH
ALL THE SCIENCES AND ARTS.

Q. What is the use of philosophy?

A. The use of philosophy cannot be fully pointed out in this introduction, but will be seen at the end of the course. Yet, to excite in the student an ardent desire and love for such a study, we shall briefly point out its use and its connection with all the sciences and arts by developing the following argument. All the sciences and arts depend upon philosophy as to their *certainty*, as to their *principles*, and as to their *method*. Therefore all the sciences and arts depend upon philosophy and are impossible without it. And, first, as to their certainty. Philosophy has for its object the supreme principles of everything. Con-

sequently its objects are also those supreme principles of certainty and evidence, those criteria of truth, supported by which our mind clings to truth without hesitation or fear of the contrary, and with perfect assurance and satisfaction. In this sense philosophy has a character of universality which subjects to it all the sciences and arts. For instance, physical sciences have for their object everything which comes within the observation of the senses. But is what falls under the observation of the senses a true and exterior reality, or merely a sensation and a modification of our soul? If what falls under our senses is not an objective reality, but merely an internal modification; if our souls perceive no more than the image of objects, as some of the ancient philosophers thought; if odors, colors, figures, and forms are not qualities of real bodies; if these bodies and these qualities are not the determining causes of taste, of smell, of sight, etc., is it not evident that the base of all physical sciences crumbles down, and that all those sciences play about mere fictions of our mind, sheer and useless idealities? The natural philosopher studies the body. But what is a body? Is it an illusion, a sheer appearance, as was pretended by the Indian pantheists, and as was held by Berkeley only a century ago? And is it not clear that upon the solution of all these questions depends the certainty of all physical sciences? Again, the natural philosophers seek for the causes of all the operations of bodies. For, by examining a sufficient number of operations and constant facts, they endeavor to explain the causes of such operations and assign laws by which the material world is directed. Now, if, as Hume pretends, the idea of cause is a chimera, the certainty of all physical sciences is shaken, and we must consider as

dreams and visions all those pretended laws of the universe of which natural sciences endeavor to demonstrate the reality, generality, and permanence. Then all the relations of causality become simple relations of succession and time, all the operations of nature become isolated; we have no longer any co-ordination or union among beings, and that magnificent and admirable connection which binds the facts of the sensible world to each other and to their universal principle vanishes from our eyes to make room for a complete chaos. In the second place, all the sciences and arts depend upon philosophy for their principles, because the objects of philosophy are the supreme principles of everything. Thus physical sciences are founded upon the idea of being, of substance, of matter, of quality; upon the ideas of cause and effect. Without these ideas they could not proceed one step in these investigations. But what is being? What is substance? What is matter, and what distinguishes it from spirit? All these ideas must be given by philosophy.

Mathematical sciences depend upon it. Arithmetic is founded upon the idea of *number*, and consequently upon the ideas of unity and distinction; algebra upon the idea of signs representing known and unknown quantities; geometry upon the ideas of form and size, and consequently upon the idea of extension and space; mechanics upon the ideas of force, of movement, and of weight. Consequently, all mathematical sciences depend upon philosophy for their principles.

Moral sciences depend upon it, because they depend upon the ideas of the good and the just. Now, to determine what is really good and just depends absolutely upon a true and correct system of philosophy. For if we hold, with the sensists, that man is but an ag-

gregate of sensations, we shall have the consequence that that only is good which is agreeable or which is useful, and hence the moral of pleasure and of interest.

Political sciences, legislation, civil and social right, the right of nations, social and domestic economy, public and private education—in fact, all the sciences which have more or less connection with the government of nations, of the family, and of the individual, borrow from philosophy their principles and their rules; because none can govern a man, a family, or a nation without having studied the human soul, its laws and its destiny; without knowing its nature, its faculties, the motives which can influence the human heart and the human will; without knowing the objects which one must propose to it for its actions. And are not all these things the essential province of philosophy?

Medical sciences are closely allied to psychological and moral sciences. Our soul and body are united with a bond too intimate to permit the physiologist to ignore the influence of the organism on the soul and of the soul on the organism. The most perfect knowledge of the organs, and of the physical causes which derange them, would be incomplete and almost useless, if he who practises the art of healing, directing his attention exclusively to physical causes, were to disregard moral causes; if a deep knowledge of the passions, of habits, of their influence, could not enable him to combat the derangement of the organism by re-establishing order and tranquillity in the thoughts and mental functions of the patient; because man is not merely passive, and none can determine how far the free development of his activity may modify the power which he has of imagining and of feeling, and

in a certain way change all his different modes of existence.

But does philosophy rule over the æsthetical sciences, over literature as forms of our thoughts, over arts? Certainly, because it furnishes the idea of the beautiful, as well as of truth and goodness. All ideas depend on it, and by the very fact that it seeks truth in all things it is its office to determine what is really beautiful. And, first of all, is not truth eminently beautiful? What strikes the intellect more than the splendor of evidence, than the light of complete knowledge which illumines objects? What more pleasant and more keenly delightful than that which arises from the contemplation and possession of truth?

Order also has a secret charm for us which entices us and causes us to reproduce it in all our works. But what is order? Order in the disposition of objects, order in the distribution of colors, in the reproduction of sounds and forms, is regularity, fitness, and harmony; order in the imagination is the conformity of our fancy images with the realities of nature; order in our thoughts is their logical concatenation; order in our actions is the accomplishment of our duty, the conformity of the same actions with moral law; order in society is subordination, in the family obedience and love, in the individual is the subjection of his passions to his will, and of the latter to God; order in the exercise of authority is the general good, in the exercise of the intellect is truth, in the object of our love is perfection. Now, all this is assuredly beautiful and is taught by philosophy; and this science does not leave it to the individual caprice to determine the notion of the beautiful, but from the constant experience of all that which mankind calls beautiful in

nature and art, in man and in society, rises to the essential and universal idea of the beautiful and determines its laws. If the idea of the beautiful were something changeable, individual, and relative ; if its essence could be modified according to the difference of sensations, of tastes and temperaments, then all arts would be at an end, because there can be no art where science has not discovered fixed principles and laws. All æsthetic sciences, therefore, depend upon philosophy.

All industrial sciences depend upon it for its principles, because all these sciences have for their object that which is useful, and that which is useful is inseparable from the true, the good, and the beautiful. Run over all the arts which are destined to provide for the wants of men, to increase the sum of their enjoyments, and you will not find one which can be considered truly useful if it is in opposition with the immutable ideas of the true, the just, and the beautiful. Let human industry create and multiply wants unnatural and fictitious, contrary to man's true nature, and it will be highly injurious to man ; let human industry create and multiply wants contrary to his intelligence, to his morality, to the physical laws of his body, and their usefulness disappears, and they become dangerous, and sap the very foundation of man's happiness.

History depends upon philosophy ; for devoid of it, it would be a catalogue of facts and events without any connection, without cause, without any warrant of authenticity, if it confined itself to gather up indifferently whatever is transmitted to it by the memory, too frequently fallacious, of men and peoples. But history becomes science when one seeks the laws and the moral causes of events, when a sound criticism discusses

with severity the proofs and motives of credibility—in one word, when one studies to reconcile in all the annals of nations human liberty with the providential action of God, and thus creates a philosophy of history.

Finally, all the sciences depend upon philosophy for their method. Man, in all his investigations, must use certain rules to discover truth, to prove it when found, to illustrate, to defend it from the attacks of its enemies, to explain it to others. All this is called by the general name of *method*. And where shall we find the proper rules to discover truth, to prove it, to defend it, and to explain it to others, if not in philosophy—in that part which teaches the laws for directing and guiding human thought in its researches? And, last of all, our faith, without which we cannot attain our eternal destiny, depends in a certain sense upon philosophy. 1st. Philosophy must enable us to find out the true Church, by examining the motives of credibility upon which it rests and recommends itself to our minds, and by proving the necessity of an infallible guide for the solution of problems which it cannot solve, and which it is absolutely important for it to know. When this infallible guide is found and accepted, it is true that philosophy must bow then in silent submission to the dogmas which the Church proposes as the object of its acceptance as solution of philosophy's own problems, and of others far greater, because the Church teaches the philosophy of God, who, being infinite, has truths to tell far above the ken of human philosophy; but even after accepting this philosophy of the infinite, this supreme science of man is eminently useful in putting these supernatural and superintelligible truths in scientific order, in illustrating them by means of created images and similitudes which may bear a faint impression of those

truths, and which may serve to recommend their acceptance to man, and in defending them from the attacks of their enemies.

These are in a few words the use of philosophy, so neglected and despised by the ignorant crowd. We will conclude these remarks with the words of the poet :

“ With thee, serene Philosophy, with thee
 And thy bright garland let me crown my song,
 Effusive source of evidence and truth !
 A lustre shedding over the ennobled mind,
 Stronger than summer noon, and pure as that
 Whose mild vibrations soothe the parted soul
 New to the dawn of celestial day.
 Hence through her nourished powers, enlarged by thee,
 She springs aloft with elevated pride
 Above the tangling mass of low desires
 That bind the fluttering crowd, and, angel-winged,
 The height of science and of virtue gains.
 Without thee what were unenlightened man ?
 A savage running through the woods and wilds
 In quest of prey, and with the unfashioned fur
 Rough clad ; devoid of every finer art
 And elegance of life. Nor happiness
 Domestic mixed of tenderness and care,
 Nor moral excellence, nor social bliss,
 Nor guardian law were his ; nor various skill
 To turn the furrow or to guide the tool
 Mechanic ; nor the heaven-conducted prow
 Of navigation bold that fearless braves
 The burning line or dares the wintery pole,
 Mother severe of infinite delights !
 Nothing save rapine, indolence, and guile,
 And woes on woes, a still revolving train,
 Whose horrid circle had made human life
 Than non-existence worse ; but, taught by thee,
 Ours are the plans of policy and peace ;
 To live like brothers, and conjunctive all
 Embellish life. While thus laborious crowds
 Ply the tough car, Philosophy directs
 The ruling helm ; or, like the liberal breath
 Of potent heaven, invisible, the sail
 Swells out and bears th' inferior world along.”

—THOMSON, *Summer.*

LOGIC.

“He that is of *reason's skill* bereft,
And wants the staff of wisdom him to stay,
Is like a ship in the midst of tempest left,
Without an helm or pilot her to sway.”
—SPENSER.

LOGIC.

INTRODUCTION.

Q. Give a general idea of logic.

A. Logic may be generally understood as meaning the right use of those faculties which are destined to acquire knowledge.

Q. How many kinds of logic are there?

A. Two, natural and scientific. The first is that disposition of our mind by which we are enabled to use rightly the faculties destined to acquire knowledge. Every one knows by experience that men without education acquire ideas of many things, pass their judgment upon them, deduce one idea from others, and this they do more or less happily in proportion to the talent which nature has given them. This natural aptitude or facility to use rightly the faculties destined to acquire knowledge is called natural logic. But as natural aptitudes are mostly imperfect, and must go through a certain training and discipline to become perfect, so it is with the natural faculty of reasoning. It must be regulated and trained to discharge its office properly and perfectly. And as reason, reflecting upon the operations of other faculties, has invented so many arts, so, reflecting upon its own acts, it has given origin to a science which directs and brings to perfection the natural ability for reasoning. This science is called artificial or scientific logic, and in this limited sense may be defined: *that science or part of philosophy which treats of reasoning in order to direct the mind in the acquisition of truth.*

Q. Explain the definition.

A. It is called *science* because logic is neither *art*, nor *science* and *art* together, but simply a science, since a science is a knowledge of a thing deduced from its principles. Now, logic treats of reasoning not merely by inventing rules to form it, but by considering it in the principles which originate it. Therefore logic is a science and not an art.

Q. What is the exact difference between science and art?

A. Art is *that which gives certain rules how to do a thing*. For instance, the art of building is that which gives rules how to build; grammar is the art which gives rules how to write and speak correctly; rhetoric the art which gives rules how to convince and to persuade. Science, on the contrary, is a knowledge of a certain object drawn from the cause and principles of the object. From this distinction it is clear that science also may give rules how to do a thing, but it draws them from the principles constituting the thing, whereas art only gives rules and knows nothing of the principles from which they are derived. A carpenter applying his level carries out a rule of his art to see if a piece of wood is perfectly level, but he knows not from what principles that rule is derived. He has art, but not science; if he knew the principle of that rule, then he would have science.

Q. Continue the explanation.

A. We have said that logic treats of *reasoning* in order to state its peculiar object. For if logic be a science, it must have an object to treat about. Now, this object cannot be words, as some of the ancients thought; nor can it be the acts of the mind, inasmuch as they really exist, because real things are the object of metaphysics; therefore the object of logic is that order which our reason puts in its conceptions to form reasoning. Finally, we have said: In order to

direct the mind in the acquisition of truth, to determine the true nature of logic; because the true nature of logic is not to give directions how to act externally, as moral sciences, but how to *speculate*, how to enquire after truth.

Q. How is logic divided?

A. Philosophers have distinguished three things in reasoning: the materials of reason, called the *matter*; the combination and construction of those materials, called the *form*; and the purpose or object for which we reason, called the *end*. Take, for instance, this reasoning:

That which is spiritual is immortal.

But the soul is spiritual.

Therefore it is immortal.

In this reasoning the propositions and ideas are what philosophers call the matter; the order and the locating of the propositions is called the form; the result of the reasoning is called the end. Now, in view of these three elements, we shall divide logic into three parts. The first will treat of the matter of reasoning; the second of the form, and the third of the end, of reasoning. This division is both clear and accurate, because, to have a scientific knowledge of a thing, one must know its principles and causes. Now, there are four different causes for everything—the *material*, the *formal*, the *efficient*, and the *final*. Take, for example, a building. What is its material cause? Bricks, mortar, lumber, etc. What is its formal cause? The design in the mind of the architect, and which, carried out, gives it shape and form. The efficient causes are the architect and all those who construct it. The final cause is the object for which the building is wanted—for instance, to live in it in comfort and elegance. Say the same of reasoning. The efficient

cause of reasoning is our intellect, of which we shall speak in anthropology, or the science of man and his faculties. The material cause of reasoning are ideas and propositions; the formal cause is the order and location of the propositions; the final cause is the science which we intend to acquire and which results from our reasoning.

PART FIRST.

CHAPTER I.

MATTER OF REASONING.

Q. HOW many kinds of matter has reasoning?

A. Two kinds; one is called remote, the other proximate or near. The remote matter are ideas or terms, the proximate are judgments and propositions; because, strictly speaking, reasoning results from judgments and propositions, and these, in their turn, from terms and ideas. We shall speak first of ideas, and then of judgments.

Q. Of what ideas shall we treat in logic?

A. It has been remarked by eminent philosophers that in logic we consider ideas, not inasmuch as they are ideas of this or of that particular object, but inasmuch as they can be the object of all sciences. Now, no other idea can represent the object of all sciences except a universal idea. Therefore, in logic we treat of universal ideas. For instance, if in logic we gave the idea of a body as an *extended* substance, then this idea of body could not be applied to all the sciences treating of bodies, but only to geometry, which is founded on extension. We must, therefore, in logic treat of ideas in such a way as to render them applicable to all sciences; and this can be said only of universal ideas.

We shall divide this chapter into three articles. The first will treat of universal ideas considered in themselves; the second will treat of that *thing* which

universal ideas represent; the third will treat of the expression of ideas—that is, terms or words.

ARTICLE FIRST.

Of Universal Ideas considered in themselves; and, first, of Idea in general.

Q. What remarks must be made in order to understand what an idea *is* in general?

A. Reflecting upon the fact of our knowledge, we find that we cannot know any object, of whatever nature it may be, unless the object enters in some way or other into our minds, and thus presents itself before it; because, on the one hand, we know from experience that the operation of knowing takes place within us, and for that reason is called an *immanent* act, to distinguish it from those acts which are called *transient*, or passing, because they are accomplished outside of us. On the other hand, we cannot deny that, in order to effect an operation, the subject and the object must come in a certain kind of contact with each other. Therefore, if the act of knowing is accomplished within us, and if to do that the intellect must come in contact with the object it wants to know, it is absolutely necessary that the object should enter in some manner or other into our minds. But how can this be done? It is certainly impossible that objects could enter as they are in nature into our intellect, for this would be absurd, and we might say with the poet:

“Then what vast body must we make the mind,
Wherein are men, beasts, trees, towns, seas, and lands,
And yet each thing a proper place doth find,
And each thing in the true proportion stands.”*

* Davies' Poems.

How, then, can the act of knowing be accomplished? Thus: As objects, to be known, cannot enter into our mind as they exist in nature, they must enter therein by means of their image and similitude. This image, as it may be called, or similitude, or impression, of the objects which enter into our minds is called *idea*.* An idea, therefore, taken in this sense, may be defined, *the image of the nature of things existing in our intellect, by means of which we apprehend them.*

Q. What consequences can you draw from said definition?

A. The following: 1. An idea is neither exclusively objective—that is, the object itself—nor exclusively subjective, mere work of the mind, but something between the two. It is objective inasmuch as it represents the nature of things; it is subjective inasmuch as it is an image dwelling in the subject or intellect, and is the principle and cause of its knowledge.

2. That, though the image or idea represents objects to the intellect, yet it is not the image that the intellect apprehends. The idea is only a *means* by which objects enter in communication with the intellect and present themselves before it to be known. Suppose I want to know my own face, what do I do? I go before a mirror, and an image of my face is instantly reproduced in the glass. But is it an image of my face which I know, or my own face by means of that image? Surely my own face through that image. Or suppose I want to see an object at a distance from me which my ordinary power of vision cannot reach, what do I do? I use a telescope, which puts me in contact with the object I want to see. But is it the telescope I see, or the object? The object, certainly;

*St. Thomas, P.P. qu. 12, art. 2; qu. 79, art. 3.

the telescope is only a means to put me in communication with the object. Likewise, the intellect cannot know any object except it comes in contact with it. But it cannot come in contact with it as it is in nature, substance and modification together. Therefore it comes in contact with it by its similitude.* But, this done, is it the idea I perceive or the object? Evidently the object, as the idea is only a means of contact.

3. The idea, strictly speaking, resides in the intellect, and does not represent anything else except the *nature* of the object, and, in this sense, it differs from the sensible image, which, as we shall see, is also necessary to render sensible knowledge possible; because a sensible image is also necessary for sensitive knowledge, and is both objective and subjective. When I see a geranium or a rosebush, the image of those objects must enter into my eyes, else I could not see them. When I touch a hard body, such as stone or iron, an impression of those bodies or an image must enter the sense of touch, or I would never feel them. But a sensible image differs from the idea in this: that the former resides in the senses and represents the exterior qualities of bodies, whereas the latter is in the intellect and represents the nature of objects. Hence we have defined it an image of the *nature* of an object residing in the intellect.

4. Finally, the idea being a means and principle of knowledge, it is followed by an act of the mind called apprehension. This may be defined that operation of the mind by which it knows an object without affirming or denying anything about it. I hear the words "soul," "body," "world" mentioned; the act

* How this similitude is effected will be seen in anthropology.

of the mind by which I know these objects is called apprehension. We have added, *without* affirming or denying anything about it, to distinguish apprehension from judgments, which always affirm or deny a predicate of a subject.

Q. How many kinds of ideas are there?

A. Ideas are intellectual images. Now, images can differ from each other for two reasons: either because the objects they represent are different, or because they have a different way of representing them. The picture of a flower-garden and that of a shipwreck are two different images, because each represents a different object; as likewise the representation of a storm in verses and another in music are also two different images, because, though they represent the same object, they exhibit it in different ways. The difference of ideas, therefore, may originate from the difference of the objects which they represent, or from the different way of representing objects.

ARTICLE SECOND.

Difference of Ideas according to the Difference of Objects.

Q. How many kinds of ideas are there according to this difference?

A. There are, first, *concrete* and *abstract* ideas. Before defining them we must remark that whatever exists in nature either exists in itself, not requiring anything to lean upon, to cling to, in order to exist, or it must lean on something to exist. When a thing does not require any other object to lean on in order to exist, but is self-supporting, it is called *substance*; when it requires something to hang on in order to exist, it is called *accident*, *modification*, or *quality*. The

tendrils of the vine winding around the oak for support may be an image of the accident, whereas the strong and robust oak which defies wind and storms may be taken as an image of the substance, but only as an image, because, after all, in nature both the vine and the oak are substances. Here is a better example: a table is a substance because it exists in itself; the roundness or the squareness of the table are an accident, because neither could exist without the table.

We must remark, in the second place, that all objects in nature are substances accompanied by their accidents or modifications. But it is clear that our mind, which is endowed with the faculty of analysis or of dividing, can separate one from the other and consider them apart. In the example just given the mind may consider the substance of the table independently of its form or shape; or it may lay aside the substance of the table and fix its attention upon the size and the shape. *The apprehension by the mind of an object just as it is in nature, substance and modification together, is called a concrete idea. The apprehension by the mind of a substance without its modifications, or of modifications without their substance, is called an abstract idea.*

Again, ideas according to this difference may be *simple* or *composite*: they are simple when they represent an object not composed of parts, as God, soul; they are composite when they represent an object composed of parts, as the idea of a building, a steam-engine. *Absolute* and *relative*: they are absolute when the object represented by the idea does not involve any relation with any other, as *existence*; they are relative when it does involve it, as *father, son, effect*. *Positive* and *negative*: the first is such when the idea represents the reality of a thing, as *fruitful, perfect*;

the second is such when it represents that which a being is wanting in, as *barren, imperfect*.

Finally, it may be *collective, singular, particular, and universal*. An idea is called collective when it represents the union of various individuals, as an army, a congregation, a people. It is singular when it represents an individual, such as Napoleon, Washington, Irving. It is called particular when it represents an object less extensive in relation to another, as the idea of man is a particular idea in relation to that of animal. We shall speak of universal ideas in the next article.

Q. How many kinds of ideas are there in respect to the manner in which they represent objects?

A. It is an ordinary fact that sometimes our mind perceives objects in such a way that it can easily distinguish them from all others; and oftentimes it perceives them in such a way that it cannot distinguish them from others. For instance, if I should see the hemlock, the pine, the oak-tree, I could easily distinguish them from all other trees, my acquaintance with those trees being very accurate. But if an exotic plant were put before me I could not distinguish it from others. When we perceive an object in such a way as to be able to distinguish it from all others, then our idea of the object is called *clear*; otherwise, *obscure*. But if we have such an idea of the object as to be able not only to distinguish it from others but to distinguish its particular properties from the particular properties of other objects, then our idea of the object is called *distinct*; otherwise, *indistinct*. But if we should have such an idea of the object as to be able not only to distinguish it from others in itself and in its properties, but could tell the peculiar nature and characteristics of the properties of that object from

the peculiar nature and characteristics of the properties of other objects, then our idea of it is called *adequate*, and its opposite *inadequate*. To give an instance of both distinct and adequate ideas, we will take a plant with which we are so well acquainted that we can tell the particular size, shape, and color of its trunk, its bark, its foliage, its flowers, and its fruits. This certainly would be having a distinct idea of that plant. But a botanist could go further, and be able to tell not only the particular nature and properties of that plant, but the particular nature and properties of each part of the plant. He would have an adequate idea of the plant.

ARTICLE SECOND.

On Universal Ideas.

Q. What is the meaning of a universal idea?

A. If an idea be an image, a universal idea must mean a universal image. The word universal is derived from the Latin words *unum versus alia*, and signifies a thing which refers to many; so that, in order to call a thing universal, these two elements are required, *one* and *many*. Hence a universal image means an image representing a thing common to many. Now, the question arises—Is it possible that an idea can represent something common to many? This question, upon which all philosophy rests, has been discussed at all times, and more especially from the eleventh century to the fourteenth, and has been answered differently, but the principal opinions may be reduced to four.

Q. State distinctly the state of the question and give the opinions of the various systems.

A. As an idea is an image, we repeat, a universal idea

must be a universal image. Now, an image represents a reality, as it must be the image of something. Therefore a universal image must represent a universal reality, or some real thing common to many. This is agreed upon by all philosophers. But the question comes up. Is there in nature such a thing as a universal object which a universal idea may represent? According to the different answers which philosophers have given to this question have arisen different opinions with regard to the nature of universal ideas. The first opinion, held by philosophers called Nominalists, holds that in nature there is no such thing as a universal object common to many, and that consequently what we call universal ideas are mere words or names, or at most certain conceptions of our mind representing a number of individual things. In the first sense this opinion was held by the Epicureans, and in the eleventh century probably by Roscellinus. In the second sense it was taught by Occam in the middle ages, and was held in modern times by Hobbes, Robinet, Condillac, and other sensists.

The second is the opinion of the Conceptualists. They maintain that a universal nature or object cannot possibly exist either actually or potentially—that is to say, that it neither exists nor is there any cause which could ever make it exist; but they contend that the mind can conceive such a thing as a universal nature merely as its own offspring, not as representing anything really existing or possible to exist, and consequently universal ideas are nothing more than mere conceptions of our mind, representing nothing real. This opinion was held by the Stoics of old and by Abelardus in the middle ages, and is maintained by all the idealists of our time.

The third is the opinion of the Realists. They

teach that universal natures *do* really exist, and that therefore they can be represented by a universal image. This opinion was held by the Platonists, and is held by the Pantheists of our days, with this difference: that Platonists taught that these universal natures existed in themselves and were the types of individual things, whereas Pantheists contend that they exist in individual natures but with a distinct existence.

The fourth is the opinion of St. Thomas, and lies between the opinion of the Realists and that of the Conceptualists. He teaches that natures represented by universal ideas are not mere intellectual offspring and forms with no foundation in nature, as is held by the Idealists, nor that such universal natures exist in fact, but that such ideas are formed by our mind not arbitrarily, but with a foundation in reality. Hence St. Thomas holds that universal natures exist *formally* in their universal form in the mind, but *fundamentally* in reality; and consequently a universal idea is formally so in the mind, but receives its foundation from reality. To give the four opinions in a few words, we say a universal idea is like a universal portrait. Now, a portrait must have an original. Is there a universal original in nature from which to draw this portrait? Some answer no, and say that this universal portrait is a mere word having no meaning whatever. Others answer: There is not, nor can there be, a universal original, but the mind may invent one as its own fancy work. Others say: To be sure there is such a universal original, and the portrait may represent it exactly. Finally, St. Thomas comes in and says: Let us distinguish; in nature there is no such thing as a universal original from which to draw a universal portrait, and yet this universal portrait, which we call universal idea, is not altogether a fancy work of our mind,

because the mind has a reason and a foundation for this work, as it makes the universal portrait from finding in reality one nature common to many individuals. Hence this universal portrait as *such* is a work of the mind, but the original is supplied by that one nature found in real things to be common to many individuals. I see, for instance, Peter, John, James, etc., all with their peculiar and individual differences. But amid all these differences I perceive two elements common to them all, rationality and animality. I form of these two elements an idea which is common to all three; I compare this notion with all the men I can see, and find in them the same common elements. I have therefore good reason to form the universal idea of the species *man*, consisting of the elements of animality and rationality. But every one can perceive at a glance that that universal idea, as such, does not exist in nature, for in nature I find those two elements determined and contracted by individual conditions in each man, and therefore *formally* the universal idea exists only in the mind. But can any one say that I have no foundation in reality for such an idea, since I have drawn it from the observation of many individuals of the species in which it is found contracted, and I have formed it by eliminating from those two elements all individual conditions, and then by comparing the notion of those two elements with as many individuals of the species as I can observe, and by finding it always as agreeable to them?

ARTICLE THIRD.

True Opinion about the Nature of Universal Ideas.

Q. What do you think of the opinion of the Nominals?

A. They say that universal ideas are mere sounds or conceptions of a number of individuals. Now, such opinion is false. 1. Universal ideas cannot be mere words, for words, as every one knows, are signs of ideas. Now, a sign cannot exist without a thing signified by the sign; therefore all these words which the Nominals call universal must always suppose a universal conception of the mind.

2. It will not do to say that the best part of the Nominals admit that a certain conception of the mind corresponds to these words, because this conception is not a universal idea, but a conception of a plurality and number. For how could such a conception represent a plurality of individuals? Only in two ways—either they represent this number of individuals distinctly and severally, or they represent it in common and confusedly in consequence of a certain similitude among them. The first supposition is impossible, because individuals are surrounded by so many qualities and accidents that each one of them has an existence all its own and distinct from that of others. Therefore each one of them implies an idea and a conception all its own, and consequently it is impossible that one idea could represent distinctly and severally a number of individuals as individuals. How could I, for instance, express distinctly and severally by one idea Washington, Shakspeare, Homer, Michael Angelo, Titus Oates, Arnold, Robespierre, and Joan d'Arc? If it is said that one conception represents a number of individuals in consequence of a certain similitude among them, then we say that, by the admission of the Nominals themselves, that which is represented by universal ideas are not individual things as such, but that in which they resemble each other. Therefore a universal idea must be something

common to many. 3. Besides this, we always attribute to individuals that which is signified by the universal idea, or words, as the Nominals call them. For instance, we say Peter is a man, the horse is an animal. Now, in the opinion which we are refuting such expressions would be absurd, because they would mean nothing, as they would amount to this: Peter is a mere name, the horse is a mere sound. We conclude with the remark of Leibnitz, that if the opinion of the Nominals were true, all the sciences which rest on universal ideas would be a mere empty sound and sceptics would win the day.

Q. What is to be said of the second opinion?

A. That it is also false. 1. Because it is a fact that we divide all real existences and individuals according to the various universal ideas of genus, species, and the like; for instance, we refer Peter and Socrates to the genus *animal* and to the species *man*, and the horse and the lion to the species *brute*. Now, if nothing real and objective in nature corresponded with these universal ideas, by what right could we refer the horse and the lion to the species *brute* and man to the species *man*? We could only say that Peter corresponds with a certain fancy work of our brain called man.

2. In the second place, if the opinion of the Conceptualists were admitted, all the sciences would be at an end, because all the sciences cannot be possible without universal propositions and ideas. If, therefore, universal ideas represented nothing real and objective, the sciences founded upon them would be mere fictions of our mind and not sciences of real things.

Q. Examine the third opinion.

A. 1. Universal natures cannot exist in reality.

This will be demonstrated when we speak of the essences of things. We conclude, therefore, that the third opinion must be false. Besides, ideas must represent that to which they are applied. If universal ideas, therefore, represented universal natures, we could not apply them except to universal natures. But all mankind applies them to individual things or persons; we say, for instance, Walter is a man, my horse is an animal. Therefore universal ideas do not represent universal natures.

Q. Prove the fourth opinion.

A. According to the doctrine of St. Thomas, universal ideas, as such, exist *formally* in our mind, but *fundamentally* in individual things. Now, that natures represented by universal ideas exist fundamentally in individual things is proved from this: the nature which the intellect perceives in the universal ideas is the same which, restricted and contracted by individual conditions, is found in individual things. This is so true that we predicate it of each individual, and say Peter is a man, the horse is an animal. Therefore it is clear that natures represented by universal ideas are the same as those of individual objects. But they exist formally, as universal, only in the intellect, and are its own work. In fact, the natures of things may be supposed to be universal in a threefold sense: 1. In themselves, considered in the elements which make them such natures; 2. Inasmuch as they exist in individuals; 3. Inasmuch as they exist in the intellect. But we cannot admit the two first suppositions, because the natures of things cannot, in the first place, be supposed to be universal in themselves, for the reason that all that which belongs to the nature of an object, considered in itself, must belong to every individual possessing that nature; for

instance, all the elements composing human nature must belong to every man. If, therefore, universality belonged to human nature in itself, every man would be a universal, which is absurd. We cannot admit the second supposition, that a nature possesses universality as it exists in individuals, because everything which is found in an individual is contracted and determined by its individual conditions. Therefore universality must be attributed to the natures of things, inasmuch as they are found in the intellect—that is to say, the nature of things, being found in the same things contracted by individual qualities, is rendered universal by the consideration of the intellect, which deprives it of its individual qualities and considers it as common to all.

Q. Define, then, a universal idea.

A. It is *an idea representing a common nature, found out by the intellect in a number of individuals of that nature.*

ARTICLE FOURTH.

Observations respecting the Nature, Elements, and Properties of Universal Ideas.

Q. What remarks should we make in order to illustrate the definition just given?

A. 1. We must observe in what manner an idea is rendered universal. The natures of things, as we have said, are singular. In what manner, then, can our intellect render them universal? We answer, by way of abstraction and reflection. Our intellect is endowed with a certain faculty of separating, in a given object, one thing from another, and of fixing its attention and consideration upon one, laying aside all others; as, for instance, having before it the object man, it

can separate it in all its elements and take the element animality for its present consideration, laying aside reason; or it may put on one side animality and take reason for its consideration. Our intellect exercises this faculty especially about individual things; because, seeing that its proper object is not the individual and the singular, but the nature of things, and on the other hand finding all the objects of nature clothed with individual qualities by the faculty of separation, it takes off from those individual objects quality after quality until the bare nature is left. The nature of things thus deprived of and purified from its individual qualities is called *universal metaphysic*, and the operation by which the intellect has reduced it to that state is called *abstraction*. The nature thus deprived of its individual conditions is neither universal nor singular. It is not singular, because it has been stripped of all those individual qualities which made it so. It is not universal, because it only exhibits the essential elements of a nature which, in themselves, are not universal; else all individuals containing those elements would be universal. Hence, for an idea to be truly universal, it is not sufficient that the essence represented by it be only abstracted from its individual qualities, but something else is necessary. It is absolutely necessary that the intellect, having abstracted the essence from individual things, should consider it fit to be found in all individuals which lie under it. Then only can we say with propriety that the idea is universal, because then only we find in it *unity* and *plurality*—*unity* the abstract nature, *plurality* the individuals possessing it. Such an idea is called *universal logic*, or, strictly speaking, universal, and the second operation of the intellect, seeking for the same nature in individuals, *comparison or reflection*. By two

ways, then, an idea is rendered universal—by abstraction and reflection.

“Doubtless this could not be but that she* turns
Bodies to spirits by sublimation strange ;
As fire converts to fire the things it burns,
As we our meats into our nature change,
From their gross matter she abstracts the forms,
And draws a kind of quintessence from things,
Which to her proper nature she transforms,
To bear them light on her celestial wings
This doth she when from things particular
She doth abstract the universal *kinds*,
Which bodiless and immaterial are,
And can be only lodg'd within our minds.” †

Q. How is a universal idea distinguished from all other ideas?

A. It is easy to distinguish it from singular and particular ideas. The only idea with which it might possibly be confounded is the *collective*. But it is easy to distinguish one from the other if we attend to these two observations: 1. The universal idea can be predicated of *all* individuals comprised within a species or a genus, whereas the collective idea can only be predicated of many, but not of all, which are comprised in a species. For instance, take the species man; that idea, man, applies to all the individuals of the species, but the idea army cannot apply to all individuals of the species man, but only to a number of them. 2. The universal idea can be predicated of every individual of the species separately, whereas the collective idea cannot be predicated except of all individuals taken together. For instance, we apply the specific idea man to every individual man taken separately, but we could not predicate the collective

* The soul.

† Davies' Poems.

idea *people* of every separate individual forming a people.

Q. What are the elements of a universal idea?

A. Two: *comprehension* and *extension*. To have a universal idea it is necessary that the nature represented by it be abstracted from its individual conditions, and also that it be thought as applicable to many individuals. The essential constituents of the abstract nature are called the *comprehension* of an idea. Its capacity of being applied to many is called the extension of an idea.

These two elements are governed by the following law: They are always contrary to each other. In proportion as the comprehension or the contents of an idea increases, its extension or applicability to many diminishes; and, on the contrary, in proportion as its extension increases its comprehension diminishes. This law is expressed by the following formula: *The comprehension of an idea is in the inverse ratio of its extension*. For instance, if to the idea animal you add the element of reason, you increase its comprehension or contents, but you belittle its extension; as in the former state it could be applied not only to the human species but also to the brute species, whereas by adding that element you can only apply it to the human species.

Q. What are the properties of universal ideas?

A. A universal idea represents a nature capable of being attributed to many individuals or species. This capacity of being attributed to many individuals or species is called *Predicability* of an idea.

Again, this nature included in the universal idea is abstracted from all its individual conditions which make it belong to this particular individual place or time. Now, by the abstraction these particular conditions

are thrown aside, and, therefore, in this state the nature belongs to all time and place. This property is called *Perpetuity of an idea*. This must not be understood in the sense that it *does* positively exist at all time and is eternal; because the actual and real existence of the universal idea is in our mind and follows the conditions of our mind. Our mind not being eternal, neither is the universal idea eternal. The universal idea, therefore, is perpetual in a negative sense—that is to say, inasmuch as it bears no particular traits of this or that time, place, and individual.

CHAPTER II.

OF THE DIFFERENT OBJECTS WHICH A UNIVERSAL IDEA
MAY REPRESENT, AND OF THE DIFFERENT MODES OF
REPRESENTING THEM.

Q. WHAT necessity is there for studying the different objects of a universal idea and the different modes of representing them?

A. One cannot have a correct notion of an image if he does not know the objects it represents and the different ways of representing them. Having, therefore, said that a universal idea is an image formed in the intellect, to understand it well we must study the objects it may represent and the different ways it has of representing them. In other words, a universal idea represents *something common to many*. We must, therefore, study what is this *something common*, and in how many ways it may be attributed to many. We shall begin from the ways or modes in which a universal idea represents objects—ways or modes which have been called by philosophers *categorema*, or, simply, universals.

Q. How many universals are there?

A. The idea is called universal inasmuch as it represents an object as attributable to many. Therefore the modes or ways of representing an object universally must be as many as there are ways of attributing a thing to many. Now, a thing may be attributed to many in the following ways: It may be attributed to them as representing an element of their essence; or as representing that particular ele-

ment which distinguishes them from all others and in which none other can share; or as representing the full and complete essence; or as something not forming an element of the essence, but a necessary consequence of it; or, finally, as something not at all necessary to the essence, but accidental to it. For instance, take the idea animal in respect to man; what does this idea represent with respect to man? An element of his essence, because animality enters as an element in man's essence. Take the idea reasonable; what does it represent with regard to man? That peculiar element of his essence which distinguishes man from all other beings inferior to himself. Take the idea reasonable animal; what does it represent in respect to man? His complete essence. Take the idea capable of learning; what does it represent with regard to man? Something which necessarily follows from his essence. Take the idea white; what does it represent? Something not at all necessary but quite accidental to the essence of man.

There are, therefore, five modes of representing something as common to many: as a part of their essence; as their complete essence; as that peculiar element which distinguishes them from all others; as something necessarily following from, or something quite accidental to, the essence. There are no other possible ways of representing something as common to many. The first—that is, that common thing which forms an element of the essence of many—is called *genus*. The second—that is, that common thing which represents the complete essence of many—is called *species*. The third is that peculiar element which distinguishes the essence from that of others, and is called *difference*. The fourth is that

which necessarily derives from the essence, and is called *property*. The fifth is called *accident*.

Q. Speak of the first universal, *genus*, and point out its offices.

A. Genus is defined: *A universal nature, which may be attributed to several species as an element of their respective essences*. Before explaining this definition we must remark that we are obliged necessarily to explain the *genus* by means of the species, and *vice versâ*, as they are relative terms. That they are naturally related is clear from the fact that two things are necessary to form the nature of genus—first, it must be found in several species, and not in several individuals, as some have said, because genus is attributable only to that which is immediately under it. But directly under the genus is the species, not the individual. Therefore genus must be attributable to several species. The second is, that genus is attributed to species as an element of its essence, which it has in common with other species. Thus *animal*, which is genus respecting man and the brutes, contains only an element of their essence.

Q. What is species?

A. *A universal notion which can be attributed to many individuals as their complete essence*. To have the nature of species, therefore, two things are required: 1. It must be applicable to many individuals, because it is a universal notion, just because it is attributable to many individuals. 2. It must be attributed to many individuals as their complete essence. Thus, man is attributable to Peter, John, Walter, and all individuals of the human species, as representing their complete essence.

Q. What is difference?

A. *A universal idea which can be attributed to many*

individuals, as that element which distinguishes their essence from all other essences. Reasonableness in man is just the difference which distinguishes his essence from all others. And it is to be remarked that difference is a universal idea, inasmuch as it is predicated of many individuals as the distinguishing element of their essence, and not in any other sense. We conclude, therefore: Genus is a universal idea which represents a common element of the essence of a number of species. Difference represents that element which distinguishes the species from each other, species the complete essence of many individuals.

Q. What are the degrees of universals?

A. Three: *supreme, middle, and lowest.* Genus is called supreme when it has no other above it, as *substance*. It is called middle when it has other genera above and under it, as body, which has the genus substance above it and two below it, *living bodies* and *inorganic bodies*. It is called lowest when it has no genus under it but species, as the genus animal, which has two species under it, *reasonable* and *unreasonable animals*. Likewise species and difference are called supreme if they have no species or difference placed above them; middle if they have them above and below them; lowest when they have none but individuals below them.

ARTICLE SECOND.

On Property and Accident.

Q. Define the universal called property.

A. It is *a universal idea representing something common to many individuals, as necessarily emanating from their essence.* Freedom in man, for instance, is a property, because, though it is a quality which does not

enter in the definition of his essence, is yet necessarily flowing from it. And if so flowing, it is clear that it must have the same qualifications as the essence. Now, the essence has three qualifications: 1. It is applicable only to the species, because by means of the essence individuals are classified in their own species. 2. It must be applicable to all the individuals of the species. 3. And that for ever, because neither the species nor the individual can ever exist without their nature. Property, therefore, must be applicable to one species, to all the individuals of the species, and for ever. These three qualities distinguish property from all accidents; from those accidents which are applicable to the species, but not to all individuals. We can say, for instance, that every man is free, but we cannot say that every man is a poet, the latter being an accident which becomes some of the species, but not all; from those which belong to all the individuals of the species, but not exclusively to that species. I can predicate freedom of man alone, but to have two feet or to possess teeth I can say of man and many of the species brute.

Q. Define accident.

A. It is quite the contrary of property, and may be defined: *That universal notion which may be found or not in a number of individuals without at all interfering with their nature.* Hence, in order to have the idea of accident it is not necessary that it should be separable from an individual; it is enough that we may conceive the individual as without that accident, leaving at the same time his nature unchanged. To be black is inseparable from the raven, yet that quality is an accident in the raven, as we can easily think its essence without that quality.

Q. How can universals be predicated of a thing?

A. Before answering the question we must make two remarks: 1. That universals may not only be predicated of real objects, but may be predicated of each other; as, for instance, accident may have its genus, species, difference, property, and accident. Thus the accident *red* is a species under the genus color, the difference of which might be determined by a given shade of red, etc.

Second remark. Universals may be predicated in the abstract form or in the concrete, as we may say animality and animal, reasonable and reasonableness, free and freedom, learned and doctrine.

Having premised these two remarks, we give the rules how universals may be predicated of things:

1st rule. *Difference, property, and accident are never predicated of a subject in the abstract form, but always in the concrete.* Because these universals represent a quality, and therefore must be applied as adjectives which qualify a thing. Now, adjectives are concrete and not abstract; hence we must say man is reasonable and free, and not man is reasonableness and freedom; Peter is learned, and not Peter is doctrine.

2d rule. *Genus and species are predicated in the concrete form when it is question of substances.* Hence it is right to say *Peter is a man*, but wrong to say *Peter is humanity*. The reason is that substances are attributed in their true and complete sense, and therefore in concrete.

3d rule. *Genus and species, when it is question of accidental things, are predicated in the abstract.* I can say, for instance, whiteness is a color, but not that which is white is colored, because when the accident is expressed in a concrete form, as when we say colored instead of color, the principal idea which is meant is no longer the accident but the substance

which upholds it, and therefore there would be no more question of accidents but of substances.

4th rule. *Universals are predicated in all their comprehension, but not in all their extension.* Because, in order to attribute a universal idea to a thing, it is necessary that I should find all the elements composing that universal idea in the thing to which I wish to attribute it; but it is by no means necessary that that thing should be the only one to which the universal may be applied, otherwise it would no longer be universal.

ARTICLE SECOND.

Of the Objects of Universal Ideas, or of Being and its Categories.

Q. What is the object of universal ideas?

A. It is *being*, or one of its *determinations*. Because the idea, inasmuch as it is an image which represents things to be known, is a means of knowledge; therefore all that which can be an object of our knowledge can be the object of our ideas. But the object of our knowledge can only be *being* or one of its *determinations*, as a thing can be known inasmuch as it *is*. These, therefore, are the objects of universal idea.

Now, that *being* can stand for the object of universal idea is beyond doubt, as we daily say *being is*, *being is not*. *Nothing can be and not be at the same time*. But we must remark that when the idea has *being* for its object it does not represent it in any of the five modes above spoken of—that is, as genus, species, difference, property, or accident—because, as we shall see in Ontology, *being* in general cannot be any of these things.

Q. How many are the determinations of *being*?

They are innumerable, as every being is a determination of being. But here we intend to speak only of those supreme divisions and classifications of being in which all other beings are included, because the object of logic is not this or that particular being, but the order of the conceptions of our mind. It is necessary, therefore, to explain those common divisions and universal conceptions which put in order and distribute all beings into so many classes and categories.

Q. How many categories are there ?

Ten ; because being, universally considered, can be divided into substance and accident, meaning here by accident everything which is not a substance. Substance, being the base of all the variety of accidents, and hence fixed and determinate in its idea, is taken always in the same for all substances, and therefore is not divided into other genuses. Accident, being more vague and confused and various, in order to determine and to fitly classify it, is divided into nine classes. Because accident is added to substance and determines it. Now, substance may be determined by nine things—by *quantity, relation, quality, action, passion, time, place, site, and habit*. Hence accident is divided into all these classes. Being in general, therefore, is divided into ten grand orders, which are called categories—that is, supreme genuses of things—and which are *substance, quantity, relation, quality, action, passion, time, space, site, habit*. This is the celebrated division of being accepted and illustrated by the greatest thinkers of antiquity. We shall give here the definition of substance, accident, relation, and quality, as they occur so frequently in logic, and shall speak of the rest in Ontology.

Substance is *that which exists in itself, and not in another*, as Peter, tree, stone. By this substance is

easily distinguished from accident, which is that which must lean on another in order to exist, as *white, square, round*, etc.—things which cannot exist without leaning on another.

It is to be carefully remarked that the essence of the substance is to *be in itself* and not by itself. The first means that the substance requires no other being to lean on in order to exist, which is true; the second would mean that substance does not require a cause to create it, which is false of finite substances.

Relation can be defined *that order which an object has with regard to another; how an object lies to another*. For instance, *paternity* is a relation which implies the order in which a father stands to his son.

This category may be real or logical: it is real when it exists actually in nature, as the relation of paternity; it is logical when it is placed by our mind.

Quality. This accident may be defined *that which of itself gives a special manner of being to the substance*.

It is called an accident to distinguish it from the specific difference, which is also a quality, but constitutes the essence. The other words distinguish it from other accidents because other accidents modify the substance more or less, but this they do not by themselves, but in consequence of something else; as, for instance, quantity qualifies the substance, not by itself, but by the extension of parts which it produces in it. But when I say Peter is good, this quality gives of itself a new mode of existence to Peter.

Q. Recapitulate all we have said in this chapter.

A. From what we have said in this chapter it is evident how many and what are the different species of universal ideas. A universal idea is an intellectual

representation. Now, these representations or forms are as different as are the objects they represent and the modes of representing them; and, as there are five modes of representing an object in a universal way—genus, species, difference, property, and accident—so, under this respect, there are five universal ideas—those of genus, species, difference, property, and accident. With regard to the object, as there are ten most universal objects, so there are ten universal ideas—substance accident, and this subdivided into relation, quantity, quality, action, passion, time, place, and habit.

CHAPTER III.

OF THE EXPRESSION OF IDEAS OR OF TERMS.

ARTICLE FIRST.

Definition and Division of Terms.

Q. What are terms ?

A. Among the many means we have of manifesting our ideas, words claim the first place.

“The words . . . the speaking picture of the mind,
The extract of the soul, that labor'd how
To leave the image of herself behind.”

—*Daniels' Poems.*

Words, inasmuch as they form a part of a proposition or reasoning, are called *terms*, because they are the very thing to which a proposition or reasoning may be finally reduced ; though the idea itself which forms part of the judgment or proposition is oftentimes called term. A term, therefore, strictly speaking, may be defined that into which a simple proposition may be resolved. For instance, God is holy ; this proposition may be resolved into *God* and *holy* ; these, therefore, are the *terms* of the proposition.

Q. How are terms divided inasmuch as they are signs of ideas ?

I. A term may be of as many kinds as there are ideas, because they are destined exactly to express ideas, and everything which has relation with another object may easily be called after it, as we say generally wholesome food, drink, and so forth, not because such

things are subject to health, but because they have relation with it, inasmuch as they are either its cause or its sign. Likewise, terms having relation to ideas may reasonably be called after them. Hence, as there are abstract, concrete, collective, particular, universal, and individual ideas, and so forth, so there are also abstract, concrete, collective, particular, universal, and individual terms. But besides, terms as signs may be divided into three great classes. Some signify a thing by themselves, such as the term *man*; others cannot express anything by themselves, but must be joined to others, as *some, every*, which uttered by themselves mean nothing, but have a meaning when united to those of the former class, as *some men, every tree*; others, finally, may or may not signify something by themselves. The first are called by modern philosophers terms *significantive by themselves*; the second, *significantive by means of others*; the third are called *mixed terms*. The first, however, strictly deserve the name of *terms*.

Q. How are terms significantive by themselves subdivided?

A. 1. Into positive and negative. The first signify something, as *man*; the second express the absence of something, as *impotent*—that is, the absence of power. About the latter we must remark that some of them are negative as to the word, but positive as to the meaning, as *innocence, immortality, infinity*, which imply a positive perfection; others are positive as to the word and negative as to the sense, as *mortal, corruptible, blind*.

2. Into *complex* and *incomplex*, the first are those which are formed of more than one significantive word, as *Washington Irving*; the second of one, as *tree, spiritual*.

3. Into *univocal, equivocal, analogical*. The first are those which are applied to several objects under the same signification, as *animal*, which is applied to man and to beasts.

The second are those which are applied to several things in a different meaning, as *scorpion*, which means the animal of such name, and is also given to one of the signs of the Zodiac.

The third are those which lie between the two former ones, and which are not applied to more than one thing in the same meaning, nor in a meaning altogether different, but are applied to something in consequence of a certain similarity with other things; as when we say the air is very healthy, the term *healthy* is analogical, because, although the term can be strictly applied only to the human body, it is yet by analogy or resemblance applied to air, to food, to color, etc.

ARTICLE SECOND.

Properties of Terms.

Q. How many are the properties of terms?

A. Five: *supposition, alienation, amplification, restriction, and appellation*; because every term may be applied either in its proper meaning, and then we have *supposition*; or in a meaning not its own, and then we have *alienation*; or in a wider meaning, and then we have *amplification*; or in more restricted sense, and we have *restriction*; or it may be added to illustrate another term, and then we have *appellation*.

The *supposition* of a term is, therefore, nothing more than the use of the word in its proper sense. The *appellation* may be twofold. It is material when the term is used not for its object but for itself, as in

that sophism mentioned and refuted by Clement of Alexandria: "What thou utterest passeth through thy mouth. But thou utterest house; therefore house passeth through thy mouth." The supposition of the term here is material; it means the word house, but not the object signified by the work. On this also is founded that beautiful impersonification of the five vowels:

"We are little airy creatures,
All of different voice and features;
One of us in *glass* is set,
One of us you'll find in *jet*,
T'other you may see in *tin*,
And the fourth a *box* within;
If the fifth you should pursue,
It can never fly from *you*."

—*Swift*.

When the term is used to mean the object, then the supposition is formal, as a *house must have walls and roof*.

Q. How is formal supposition subdivided?

A. 1. Into logical and real. It is logical when the term expresses that which exists only logically, as animal is a predicable called genus. It is real when the term is used to express that which really agrees with the object, as the animal is sensitive.

2. Into collective and distributive. It is *collective* when we use a common word for all the objects signified and taken together, as the apostles were *twelve*. It is *distributive* when the term can be used not only for all but for each one, as man is rational. But with regard to this distributive supposition we must remark that the individual objects may be either each individual, or not each individual but each species, as *all animals were in Noe's ark*. The sense here is that

not each individual animal was there, but each individual species.

Q. What is appellation, and how is it subdivided ?

A. It is the application of one term to another, and it is formal and material—formal when it naturally agrees with the other, as the *physician cures* ; material when it is merely accidental, as the physician sings or dances.

Q. What is alienation ?

A. The use of a term not in its own proper meaning, but in another, as the *Lion of Juda, the Sun of Justice*.

Q. What is amplification ?

A. It is the extension of a term from a less comprehensive sense to a greater, as *great men will always be honored*—meaning not only great men of the present time, but of all time and place ; and that playful amplification of Pitt :

“ From the small acorn see the oak arise,
Supremely tall and towering in the skies !
Queen of the groves ! her stately head she rears,
Her bulk increasing with increasing years ;
Now moves in pomp majestic o'er the deep,
While in her womb ten thousand thunders sleep—
Hence Britain boasts her far-extended reign,
And by the expanded acorn rules the main.”

Q. What is restriction ?

A. The use of a term which has a broader signification in a more narrow one, as Eve was the mother of all living. Living, in this phrase, is taken in a more restricted sense than it has, naturally meaning everything which has life, from the plant to God, whereas in the phrase it is merely to express men.

CHAPTER IV.

PROXIMATE MATTER OF REASONING; AND, FIRST, OF THE NATURE OF JUDGMENT AND PROPOSITION.

ARTICLE FIRST.

Nature and Definition of Judgment.

Q. What is judgment?

A. We have said that our mind acquires universal ideas when it considers a quality as applicable to a number of subjects. If, then, the mind applies a quality to one or more subjects, or removes it from them, we have another act of the mind called judgment. For instance, our mind may reflect on the quality *rational*, as applicable to Peter, John, Walter, Andrew, and to all men, but it may do more: from the possibility it may pass to the fact and actually apply that quality to them, and say Peter *is* rational, John *is* rational, all men *are* rational; or it may deny a quality of a subject, as man is not bird. In the first instance we have a universal idea; in the second, a judgment.

Q. In what exactly lies the nature of judgment?

A. To be able to affirm or to deny a quality of a subject it is necessary that the mind should, in the first place, compare the idea of the subject with the idea of the quality; and, next, that it should perceive the agreement or the disagreement which may exist between the two, otherwise it could not affirm or deny one or the other. Now, though the comparing of

the quality with the subject be necessary to render a judgment possible, yet the true nature of judgment lies exactly in the agreement or disagreement of the quality with the subject, and in the affirming or denying one or the other. Because to form a judgment, as we have said, the actual application to, or the removing of a quality from, a subject is necessary. But in the mere comparison of the two terms that application is wanting. When I raise, for instance, a question in my mind, Is Peter honest? and begin to compare the two terms, I have not pronounced a judgment as yet, because I have made no application. When I say Peter *is* honest, then I have formed a judgment. The essence, therefore, of the judgment lies not in the comparison of the two terms but in the discovery of the agreement or disagreement of the two ideas, subject and quality, and in the affirmation or denial of the same. And as definition must express the nature of a thing, so we may rightly define judgment *the perception of the agreement of a quality with a subject, or the disagreement of a quality from a subject*; or, with St. Thomas, *that act of the mind by which it unites or divides by affirming or denying*. The thing which is affirmed or denied is called *predicate*; that of which something is affirmed or denied is called *subject*; and the judgment, if it affirm something of the subject, is called *affirmative*; if it deny, is called *negative*.

Q. What conclusions do you draw from the nature of judgment?

A. I. That judgment is a more perfect knowledge relatively to ideas, because by means of the idea nothing is affirmed or denied of a subject, and hence its knowledge is not complete; whereas the nature of judgment consists exactly in that affirmation or negation. Therefore judgment is a more perfect know-

ledge than simple apprehension, and is therefore a proximate matter of reasoning, as being a more perfect knowledge of a thing.

2. In judgment there is always found a universal perception; because, the essence of judgment consisting in affirming or denying a predicate of a subject, or, in other words, in saying that one of the terms is the other, as man is rational, there lurks in that affirmation the perception of the *unity* of being between the subject and the predicate, *man* and rational. But to see unity common to a plurality is a universal perception; therefore in every judgment there is always a universal perception. This is also the case when the judgment is negative, as when we say Peter is not a philosopher, because I discover that not to be a philosopher is common also to Peter, from which it is evident how important to reasoning and logic are universal perceptions.

ARTICLE SECOND.

Nature of Propositions.

Q. Give the definition and elements of a proposition.

A. Judgment is so called when confined within the mind; when it comes out of the mind clothed in words it is called *proposition*. Man is a reasonable being is a judgment expressed in words, and therefore a proposition. And because judgment affirms or denies something of a subject, according to this a proposition may be defined a discourse, by which we affirm or deny a quality of a subject. Hence three elements enter into a proposition—the thing of which something is affirmed or denied, and which is called subject; the quality which is affirmed or denied, and which is called predicate; and, finally, the verb *is* or *is not*, which,

strictly speaking, expresses the essence of judgment—that is, the act of the mind forming the agreement or disagreement. The first two are called the *terms* of a proposition. The verb *is*, because uniting them together, is called *copula*.

Q. What remarks ought to be made as to the copula in a proposition?

A. 1. The copula is always necessary in a proposition, and no proposition can be formed without the verb to be. Because to establish a proposition it is not sufficient to express the subject and the predicate, but it is also necessary to express the agreement or disagreement which one has with the other. Now, this agreement or disagreement cannot be expressed by means of the predicate only, because the predicate without the copula would imply no relation to the subject. Therefore the copula is necessary in every proposition.

2. Having established the necessity of the copula, and having said that it is a verb, we must pay attention to its signification, to its mood, its tense, and to the special manner of using it. As to its signification, we must remark that *to be*, in the proposition, does not mean to exist, because the copula does not express the real existence of the terms; as, for instance, when I say Shakspeare is the greatest English poet, I do not mean to say that Shakspeare does actually exist now, I mean merely to unite that predicate to Shakspeare. Therefore the copula in propositions merely expresses the agreement of the predicate with the subject, or the act of the intellect applying the predicate to the subject. Whether the objects signified by the terms exist or not it is no business of the copula to express. It is by a different act of the mind and by investigating the nature of the terms that it

can be found out whether they be real or logical. Nor is it contrary to this theory to say that there are some propositions in which the copula expresses the real existence, as Socrates is; because that proposition amounts to this: Socrates is existing; in which case also the copula expresses the union of the two terms.

Q. Of what mood and tense must the copula be?

A. As to the mood, it must be the indicative mood, because the copula in a proposition is used to affirm and declare a predicate of a subject or to deny it of the subject. But of all the moods of a verb only the indicative has the office to affirm, to declare, to deny. Therefore the copula in a proposition must be in the indicative mood.

As to the tense, it must be the present tense, because the copula, as we have said, does not express the real existence of the terms, but the act by which the mind unites the predicate with the subject or separates one from the other. But this act is done when the mind judges—that is, in the present time. Therefore the copula must be in the present tense. If there be any propositions having the copula in the past or future tense, the time past or future must be applied to the tenses, and not to the copula. The proposition, for instance, The Messiah was the Redeemer of Israel, must be understood to mean the Messiah is *he* who was the Redeemer of Israel, the predicate being *who was the Redeemer of Israel*.

Finally, we must remark that the copula in a proposition may be incorporated in the predicate, as, for instance, in the proposition John is sleeping, the predicate sleeping may be incorporated in the copula, and we can say John sleeps. From this originate those verbs which grammarians call adjective—that is, those which contain the verb to be as an attribute to

distinguish them from the verb to be as substantive. In conclusion one must pay close attention to the nature of the copula, because from it all these things proceed. The copula is nothing else but the act of the mind uniting or separating the predicate from the subject, in which the essence of judgment consists. It follows from this, 1st, that the copula is as necessary to the proposition as that act is essential to judgment; 2d, that the copula does not express the real existence of the subject or predicate, but merely the act of the mind uniting or separating them; 3d, that that act being nothing else but an affirmation or negation, the office of the indicative mood, the copula expressing it must be also in the indicative mood; 4th, that, the act being performed in the present time, the copula must be in the present tense; 5th, that in that act the predicate being considered as applicable to the subject, it may easily be incorporated in the copula, the office of which is just to refer the predicate to the subject.

CHAPTER V.

DIFFERENT SPECIES AND PROPERTIES OF PROPOSITIONS.

ARTICLE FIRST.

Difference of Proposition considered as to the Copula.

Q. What causes the difference of propositions?

A. From the nature of a being immediately arise its different species and properties, because the species of a thing is nothing more than the nature of the thing itself differently modified, and its properties are an immediate consequence of that nature. Having, therefore, determined the nature of judgment and proposition, it will be easy to deduce from it their division and properties. The nature of judgment or proposition lies in applying or not a predicate to a subject; therefore propositions must be different, according to the difference of such application. This application may vary from two causes, from itself and from the way it is made, or from the terms which are applied—that is, either from the copula or the terms.

Q. How many different propositions are there, considered as to the copula?

A. In propositions the predicate may either be applied to the subject or denied of the subject; or it may be denied of the subject, but at the same time insinuating that another may be agreeable to it. When the predicate is applied to the subject, then the proposition is *affirmative*, such as God is infinite, the

Church is imperishable ; when the predicate is denied of the subject then the proposition is *negative*—man is not a pure spirit, beauty is not imperishable ; when it is denied of the subject, insinuating that some other predicate may be agreeable to it, then the proposition is called indefinite ; as, The brute is not man, in which proposition, if we remove the predicate man from brute, we insinuate that some other attribute may apply to it. Hence, an indefinite proposition is neither affirmative nor negative, but partakes of both. These propositions, however, are not so common or important ; more common and important are the affirmative and the negative.

Q. To what law are affirmative and negative propositions subject ?

A. To the following : In affirmative propositions the predicate is applied in all its comprehension or in the totality of the elements of which it is composed, but not in all its extension—that is, not in its full capacity of being applied. Homer is an epic poet ; Bacon is a naturalist ; the predicate epic poet in the first proposition is applied to Homer in the totality of elements composing that idea—that is, every quality forming an epic poet agrees with Homer—but not in its full capacity of being applied, as that predicate may be applied, to others, as to Dante, Milton, Virgil, etc. In the second proposition the predicate naturalist agrees with Bacon in the same sense—that is, in the totality of elements forming that idea—but may be applied to others, such as Locke, Hobbes, Condillac, etc. The reason of this law is drawn from the very nature of affirmative propositions, because when we affirm a predicate of subject in a proposition we say that one thing is the other. Now, we could not say that unless all the elements of the predicate agreed

with the subject ; therefore, in these propositions, the predicate must be taken in its comprehension, but not in all its extension, because when we affirm a predicate of a subject we want to express the quality with which the subject is endowed, and not the number of individuals which may have it.

In negative propositions the predicate is not denied in all its comprehension but in all its extension, because, in order to say that a thing is not another, it is sufficient that a single element of the one is not found in the other ; but it is denied in all its extension, because if that which is signified by the predicate could agree with any part of the subject, we could not simply remove the predicate from the subject. For instance, when we say The circle is not square we mean to say that no possible circle can ever be square, otherwise we could not say, absolutely speaking, the circle is not square.

Q. In how many ways can we affirm or deny a predicate of a subject ?

A. In two ways : by simply affirming or denying the predicate of a subject, or by expressing the manner or mode in which a predicate may be applicable to a subject. In the first case we have *simple* propositions, in the second *modal* propositions. Thus, when I say The rose is fragrant, I utter a simple proposition ; when I say Man is *necessarily* reasonable, I pronounce a *modal* proposition, because I express the manner in which the predicate agrees with the subject.

Q. How many ways or modes are there by which a predicate may agree or disagree with a subject ?

A. Four ; and hence there can be four species of modal propositions. The predicate may agree or disagree with a subject *possibly* or *impossibly*, *necessarily* or *accidentally* ; and, therefore, propositions may express

the possibility or impossibility of a predicate agreeing with a subject, the necessity or contingency of its agreeing or not with it. If they express the possibility they are called possible, as *Man can be a philosopher*; they are called impossible if they express the impossibility of the predicate agreeing with the subject—as, *Man cannot be infinite*; necessary if they express the necessity—as, *The soul is necessarily immortal*; contingent if they express the contingency—as, *The Ethiopian is black by accident*.

Q. What other modes of affirming or denying, and, consequently, how many kinds of propositions, are there?

A. Two, absolute and hypothetical. We can apply or not the predicate to the subject absolutely, without expressing the case when it may or may not agree with the subject, or we may express the case when it may or may not apply to the subject. In the first case we have absolute propositions—as, *Man is a reasonable animal*; in the second we have hypothetical or conditional propositions—as, *Where there is smoke there must be fire*. These latter propositions are threefold, connex, conjunctive, and disjunctive. The first is that in which the condition is expressed by the word *if*; as, *If there are footprints some one must have walked*. This proposition is formed of two, one which expresses the condition, and is called antecedent—as, *If there are footprints*; the other affirms or denies the predicate, and is called consequent, because depending on the first—as, *some one must have walked*. The truth of these propositions does not lie in the truth of the antecedent or consequent, but in the connection; if the connection is true the proposition is true; if false, false—as, *If donkeys had wings they would fly*. This proposition

is true, though it is not true that donkeys can have wings because the connection is true. On the contrary, if I said, If America exists Rome exists, both antecedent and consequent are true, but the proposition is false, because there is no connection between the two.

The conjunctive proposition is that in which the propositions are united by the words *and, not*; as, for instance, He is *not* both dead and alive. Conjunctive proposition, then, is that in which is expressed the impossibility of two things being together, and in order to be true it is necessary that there should be a repugnance between the two. Hence the following proposition is not true: Peter cannot both sleep and breathe, because those two things can go together.

A disjunctive proposition is that in which propositions are united together by the words *either, or*; as, for instance, It is either night or day. This proposition, to be true, two conditions are necessary: 1. That there be a true opposition between the propositions of which it is composed. 2. That the enumeration of parts be complete, otherwise the adversary may catch at that which is omitted.

ARTICLE SECOND.

Difference of Propositions, Considered as to their Terms.

Q. How are propositions divided under this respect?

A. The other cause of difference in propositions, as we have said, is the difference of terms. Terms may be different either on account of their *extension* or of their *number*. Hence we have difference of propositions from the difference of terms as to their extension and as to their number.

As extension renders terms singular, particular, and

universal, so propositions under this respect may be singular, particular, and universal. They are called singular if their subjects be singular—as, Peter is a philosopher; particular if the subjects be particular—as, Some men are good writers; and, finally, universal if the subjects be universal—as, All men are rational animals. Let it be carefully remarked that the extension of propositions is taken from the subjects, and not from the predicate. Because the predicate is attributed in the proposition only to the subject mentioned, therefore the subject must determine the extension of the proposition; as when I say Peter is a philosopher, Longfellow is a poet, the predicate philosopher in the example is applied only to Peter, therefore Peter must determine the extent of the proposition.

Q. How are propositions divided as to the number of the terms?

A. Into single and multiple. Are called single when they are formed of one subject and one predicate—as, Blessed are the meek. Are multiple when they are composed of more than one subject or more than one predicate; as, Franklin was a mechanic, a philosopher, and a statesman. This proposition is equivalent to these three: Franklin was a mechanic, Franklin was a philosopher, Franklin was a statesman.

There are different kinds of single and multiple propositions. As to the single proposition, it may be so by itself or by reduction. The example, The meek are blessed, shows a proposition single in itself. They are called single by reduction when, though we may affix to the subject or to predicate various terms and other propositions, yet they can all be reduced to one idea. For instance, He who betrayed the cause of American independence was Arnold, called emphatically the

Traitor. All this can be reduced to one idea—Arnold betrayed the cause of American independence.

Multiple propositions are divided into explicit or implicit. They are called explicit when openly they have more than one term or proposition; implicit when apparently they seem to be one, but their meaning is equivalent to more than one, proposition—as, Among animals man only is reasonable; the word *only* turns that proposition into two: all animals do not reason, man reasons.

ARTICLE THIRD.

Properties of Propositions.

Q. What and how many are the properties of propositions?

A. Property is called that which follows necessarily from the nature of a thing, which always accompanies it and is never separated from it. Now, admitting the nature of proposition, three things follow from it—*opposition, conversion, and equivalence*. These are consequent upon every species of proposition; every species of proposition being able to have its opposite, its converse, and its equivalent. Therefore there are three properties of propositions, opposition, conversion, and equivalence.

Q. What is opposition?

It is the affirming and denying in two propositions the same predicate of the same subject, at the *same time* and under the *same respect*. This opposition may be threefold, contradictory, contrary, and subcontrary, and hence there may be contradictory, contrary, and subcontrary propositions. Propositions are called contradictory when of the two propositions one is universal, the other is particular—as, *All men are just, some*

man is not just. They are called contrary when both are universal—as, *All men are just, all men are not just*; subcontrary when both propositions are particular—*some men are just, some men are not just.* Of these last St. Thomas observes that, properly speaking, they cannot be called opposite, because, in order to have opposition, it is necessary that the subject be the same in both propositions. Now, in subcontrary propositions, the subject, being taken in particular, is not the same in both.

Q. What have you to observe with regard to the truth of such propositions?

A. I. Contradictories cannot be both true or false, but one must be true and the other false. Because otherwise the same thing would and would not be at the same time. As in the example, *All men are just, some men are not just,* it is evident that one of them must be false, otherwise one thing would and would not be at the same time, since one proposition is included in the other.

Contraries cannot be both true, because if the affirmative is true the negative must be false, since the predicate is affirmed and denied of the same subject in an universal sense. They can be either one true and the other false when the predicate necessarily agrees with the subject—as, *All men are reasonable, all men are not reasonable*; or may be both false when the predicate only accidentally agrees with the subject—as, *All men are philosophers, no man is a philosopher.*

Subcontraries cannot be both false, but must be either both true if the predicate agrees with the subject only accidentally—as, *Some men are rich, some men are not rich*; or one false and the other true when the predicate agrees necessarily with the sub-

ject—as, Some men have a soul, some men have not a soul.

Q. What is the meaning of equivalence of propositions?

A. When we please we can reduce opposite propositions to the same signification, and when this is done we have the equivalence of propositions. This is accomplished by means of the particle *not*, thus: Contradictory propositions are rendered equivalent by placing the particle *not* before the subject of either proposition. For instance, the contradictories, All men are rich, some men are not rich, I can make equivalent by saying not all men are rich, and I reduce to the same sense as some men are rich. Contraries are made equivalent by placing the particle *not* after the subject of the affirmative; as, for instance, All men are just, all men are not just. I can put *not* after men in the first proposition, and reduce the sense to no man is just.

Q. What is conversion?

A. The changing of the place of the predicate into that of the subject, and *vice versâ*, keeping safe the truth of the proposition—as, Every man is a reasonable animal; I could say every reasonable animal is a man.

Q. What is the use of equivalence and conversion?

A. They are of very great use in discovering sophisms of adversaries, in understanding obscure and difficult propositions by reducing them to a clearer form.

CHAPTER VI.

TRUTH OF JUDGMENTS AND PROPOSITIONS.

ARTICLE FIRST.

What is Logical Truth?

Q. Give an idea of truth in general.

A. To answer this question, we must remark that whatever exists may have a twofold relation with the intellect. Things may be related to the intellect inasmuch as they draw their existence from it, or inasmuch as they are known by it. Thus, a house is referred to the intellect of the architect in a different way from that in which it is referred to the intellect of the beholders. To the intellect of the architect it is related inasmuch as it originates from it; to that of the beholders inasmuch as it is known by it. Now, it is evident that things could not exist except they were conceived by the intellect, which is their cause, in which case the relation they have with such intellect is an essential relation; but things could exist very well without any other intellect knowing them, consequently the relation they have with the intellect which merely knows them is an accidental relation. The house spoken of in the example is related essentially to the intellect of the architect; whereas it is related only accidentally to the beholders' mind. We must remark, in the second place, that between the object and the conception of the intellect either producing it or merely knowing it there may pass a relation of agreement and conformity, or disagreement,

because oftentimes the object does not correspond with the intellect of the artist, and frequently the intellect does not apprehend a thing just as it is. *The agreement of the thing with the intellect from which it is produced is called metaphysical truth. The agreement of an object with the intellect knowing it is called logical truth.* On the contrary, *the discrepancy of the thing with the intellect which originates it is called metaphysical falsehood; and the discrepancy of the object with the intellect knowing it is called logical falsehood.* Both kinds of truths are defined by St. Thomas *the equation of the object with the intellect.* We shall speak in this article only of logical truth, which we have defined the agreement of the object with the intellect which knows it.

Q. How many kinds of logical truths are there?

A. Logical truth may be different, according as we consider the things which are known and the manner of knowing them. Considering the manner of knowing things, logical truth may be *mediate* or *immediate*. It is called immediate when the intellect discovers the truth of a judgment the moment it is presented to it,—as, *The whole is greater than any of its parts*; of this judgment the intellect perceives the truth the moment it perceives the terms. On the contrary, when the intellect, in order to know the truth of a judgment, must make use of other truths better known to it, that truth is called *mediate*; as, when hearing that the human soul is immortal, in order to perceive the truth of that proposition I must have recourse to other propositions better known to me. As to the terms, logical truth may be of fact and of reason. It is truth of fact when the objects are subject to experience; it is of reason when the terms are concerned about abstract principles.

ARTICLE SECOND.

Is Truth found in the Act of Apprehension or in that of Judgment?

Q. In what act is truth found?

A. The acts of our mind are three—apprehension, judgment, and reasoning. Reasoning is nothing else but a series of judgments and ideas formed by the mind. Hence, truly, the acts of knowing are ideas and judgments. Besides, strictly speaking, reasoning is nothing more than a third judgment deduced from two others, and is true or not according to the truth and order of the two first. Hence truth can only be sought in ideas and judgments. It is found *perfectly* in judgments. Locke, Rosmini, Galuppi, and others contend that it can be found in *ideas*. We follow the opinion of St. Thomas, whose doctrine on this point seems to us more simple, natural, and true. It is as follows:

1. Truth, really and perfectly, is only in judgments. We prove it as follows: Truth consists in the agreement between the object and the intellect, and hence to know the truth is to know just this conformity. But to know that the apprehension of the intellect is conformable with the object is the work of judgment. Therefore truth perfectly can be found in judgment, because then only the intellect possesses truth perfectly when it not only has it, but when it knows that it has it.

Truth is that thing after which the tendency of the intellect is drawn, and is, therefore, the perfection of the intellect. Therefore, truly and perfectly, it is found only in that act of the mind which is a complete and true knowledge, such as judgment.

2. Truth is found imperfectly in apprehension,

inasmuch as by means of the simple apprehension the intellect apprehends something as true, but does not know it to be such. In fact, simple apprehensions of the intellect represent the essence of things, as we shall see; and therefore they must be conformable to the things apprehended. Now, in this conformity between apprehension and the object apprehended lies truth. Therefore, even in apprehension we can find logical truth. But logical truth is said to be imperfectly in apprehension and in an incipient state, because the intellect, by means of the simple apprehension, does not know this conformity, as this belongs to judgment.

PART SECOND.

FORM OF REASONING.

HAVING treated of the matter of reasoning, which are terms and propositions, we must now speak of the form—that is, we must see how those terms and propositions must be placed together in order to form reasoning. All that can be said, however, with regard to the form of reasoning may be brought under four heads—first, the essential structure and order of reasoning; second, its different species; third, its external expression; fourth, its defects.

CHAPTER I.

OF THE ESSENTIAL STRUCTURE OF REASONING.

ARTICLE FIRST.

Of the Structure of Reasoning in General.

Q. What is reasoning?

A. Propositions which may appear before the mind are of two kinds. Some are so evident that the moment they are presented before the mind their truth can be at once perceived; as, *The whole is greater than one of its parts; a thing cannot be and not be at the*

same time. These are called truths evident of themselves, or first truths. Others, and they the greatest number, are such as cannot be at once perceived by the mind. For instance, *The soul is immortal; a spiritual being cannot occupy space; time is the measure of movement, and so forth.* Now, in order to know these truths our mind must employ others better known to it, and which have some connection and relation with those it wants to know, and by placing and comparing them together comes to the knowledge of those it did not know. This operation is called reasoning or discourse, and may be defined *that act of the mind by which from two judgments a third is deduced, or that act which deduces the unknown from the known.* For instance, the mind cannot see the connection between the subject *soul* and the predicate *immortal*. What does it do? It compares both with a third idea, to see whether they agree or disagree with that third idea, and if it discover that they do agree it draws the conclusion that they must agree together. This third idea may be *spiritual*, and the reasoning may be constructed as follows:

That which is spiritual is immortal.

But the soul is spiritual.

Therefore it is immortal.

Q. What is the order of reasoning?

A. It consists exactly in this: The mind wishes to know if a proposition be true or false; in other words, if a predicate agrees with a subject. In order to find this out, the mind does nothing more nor less than what men do when they wish to find out if the length of two bodies is the same or not: they take a third one as a rule, and try it first with the one and then with the other; and thus they can tell if their length agrees together or not. The mind does the same

when it wants to know if a predicate agrees with a subject. It takes a third idea, and makes it, as it were, the rule or measure, and compares it first with the subject and then with the predicate. Now, naturally three suppositions can result from this comparison: 1. That third idea may be found to agree both with the predicate and the subject. 2. It may be found to agree with the one and not with the other. 3. It may be found to agree with neither. In the first case, when the third idea is found to agree both with the subject and the predicate, then the mind knows and concludes that the predicate and subject agree together, founded on that principle *that two things which agree with a third agree together*. For instance, the mind does not know if the soul is simple. It takes for a third idea that which has no parts, and compares subject and predicate with that third idea, thus: That which is simple has no parts. But the soul has no parts; therefore it is simple. These reasonings are called affirmative. In the second case, when the third idea is seen to agree with the one and not with the other, the mind concludes that they do not agree together, on the principle that *two things, one of which agrees with a third and the other not, do not agree together*. For instance, the mind knows the disagreement between these two ideas, a material substance and the human soul, by means of the third idea, a thinking substance, and reasons thus: A thinking substance is not material. But the soul is a thinking substance; therefore it is not material. Here the third idea, a thinking substance, agrees with the subject soul, but not with the predicate material. In the third supposition nothing can be concluded, as, the third idea not agreeing with any of the terms, no connection whatever is established between them.

Q. What are, then, the elements and fundamental principles of reasoning?

A. It must result from three propositions, and these ordained in such a way that the mind may see the last proposition as included in the two first.

It must be formed of three terms: the subject, the predicate, and the third idea.

We have said three propositions; because in every reasoning three comparisons are made, one of the predicate with the third idea; the other of the third idea with the subject; the third of the subject with the predicate. And from each of these comparisons arise a judgment and a proposition. They must be arranged in such a way that the last be contained in the two first; otherwise there would be no reasoning, but three unconnected propositions. The three terms are called as follows: The predicate the *major* term, because ordinarily speaking it is more extensive; the subject the *minor* term, because generally more restricted; the third idea the *middle* term, from the office which it exercises. Likewise also the propositions: that in which the third idea is compared with the predicate is called the *major* proposition; that in which the third idea is compared with the subject is called the *minor*; that in which the subject and the predicate are compared is called consequent or consequence. And because ordinarily in the first proposition the predicate is compared with the third idea, and in the second the subject is compared with the third idea, the first is always called the major, the second the minor, and both together, in regard to the consequence, are called *premises*.

All reasonings are either affirmative or negative. The foundation of the affirmative is that principle that *two things which agree with a third agree together*.

Of the negative the principle is *two things of which one agrees with a third, and the other does not, cannot agree together.*

Now, gathering together all we have said, it is evident that in order to have reasoning the following things are necessary: 1st. That the mind be respecting the truth of a proposition in the state of doubt, desirous to remove it; this is the *end* of reasoning. 2d. It must have a third idea, which is the *means* whereby it reasons. 3d. It must compare this third idea with the terms of the proposition it wants to know, which constitutes the *use* of that third idea. 4th. It must deduce from that comparison the truth it wants to find out, which is the *effect* of reasoning. We shall speak of each of these separately.

ARTICLE SECOND. .

Of the End which causes the Mind to Reason.

Q. What are the different states the mind may find itself in with regard to truth?

A. The end which incites the mind to reason is that it may remove that state of doubt in which it finds itself with regard to a certain truth, and take up another state. To explain this properly we must give an idea of the different states in which the mind may find itself with regard to truth. Our mind, when a truth is presented before it, may be affected in three different ways. It may adhere to it without any hesitation or fear of its contrary; it may adhere to it with a certain hesitation and fear of its contrary; or it may not adhere to it at all and remain in a state of suspense, hanging, as it were, between yes and no. Each of these things constitutes a state of the mind with regard to truth: the first is called *certainty*;

the second is called *probability* or *opinion*; the third is called *doubt*.

Q. What is certainty?

A. *That state of the mind by which it firmly adheres to a known truth without fear of the opposite.* It may be *metaphysical, physical, and moral.* It is called metaphysical certainty when it is founded on the very essence of things; for instance, it is metaphysically certain that a square has four sides. It is called physical when it is founded on the constancy of natural and physical laws, as it is physically certain that a body gravitates towards its centre. It is called moral when it is founded on the testimony of men and the laws governing human acts; as, for instance, it is morally certain that Washington was the first President of the United States. Hence, as it is evident, metaphysical certainty is absolute, as founded on the essences of things which are immutable. Physical and moral certainties are hypothetical, as they are founded on the supposition of the constancy of the laws which govern the physical and the moral world. This last observation gives rise to another distinction of certainty, *intrinsic* and *extrinsic*. It is intrinsic when it arises from the knowledge of the thing itself. It is extrinsic when it is founded on the testimony of others.

Q. How many degrees of certainty are there?

A. Certainty is made up of two elements the clinging of the mind to the truth; and the exclusion of any tendency to the opposite. Now, as regards the second element, certainty has no degrees, because this excluding all fear of the opposite is incapable either of increase or diminution. As regards the first element, the clinging of the mind, this may admit of degrees, as the mind may cling to a truth with more

or less tenacity; for instance, in metaphysical certainty the clinging of the mind is stronger and more tenacious than in the other two.

Q. What is probability?

A. *That state of the mind in which it adheres to a truth with a kind of fear of the opposite.* It may be also *intrinsic* and *extrinsic*. It is intrinsic when founded on the essence of the thing itself, extrinsic when it is founded on arguments outside the thing itself.

It may have different degrees, according to the value and number of arguments and motives which support it. Because an opinion in respect to another opinion may be equally probable, more probable, most probable in proportion as the arguments supporting it grow in weight and number. But it must be remarked that all these degrees of probability can never, no matter what their weight or number may be, reach to certainty, because if they remain probable they must always imply some fear of the opposite, and no being by mere union with another of the same kind can change its nature, hence, even united together, all these degrees of probability must imply some fear of the opposite. But certainty essentially excludes all fear. Therefore a number of degrees of probability can never give certainty.

Q. What is doubt?

A. That state of the mind in which it does not adhere either to one side or the other of an object proposed, but hangs in suspense. It has been beautifully personified by Spenser in his "Faërie Queene":

"His name was Doubt, that had a double face;
Th' one forward looking, th' other backward bent."

As it is clear, doubt differs from certainty and pro-

bability, because both imply adhesion; doubt implies suspension.

It may be positive or negative, because the mind may withdraw its adhesion either because it sees no reason in the one or other of the two things, or because it perceives equal reasons on both sides. From which it appears that a negative doubt cannot have any degrees, whereas the positive can, in proportion as the reasons pro and con diminish or increase; in the latter case the doubt approaches nearer to probability.

Q. What is ignorance?

A. The absence of knowledge. We have not enumerated it among the states of the mind because it is rather the absence of a state.

Q. In what state is the mind before reasoning?

A. In the state of doubt. It could not be in ignorance, because he who is ignorant about something cannot wish for nor seek it. Now, to reason is to seek for something. Therefore, when the mind proceeds to reason it cannot be in ignorance. It cannot be in a state of adhesion or certainty, because if it knew a truth it would not seek for it. Therefore, in order to reason the mind must neither be in ignorance nor in the state of adhesion, but must be wavering between the two; neither be ignorant altogether nor certain, but in the state of doubt. Doubt, therefore, must always go before reasoning and demonstration. Hence the truth which the mind wants to find out by reasoning before the demonstration is called the *question*; after, it is called *thesis*. This doubt is called methodical doubt. And it is distinguished from that of the sceptics and from that of Descartes. Sceptics doubted of everything, and wished to remain in doubt; whereas the doubt called methodical is invented just to bring one out of doubt, and it is called methodical

because it is taken and supposed by necessity of method, whereas the doubt of the sceptics is called systematic because assumed on system. It is distinguished from that of Descartes, who held that science must proceed from doubt; but his doubt was universal, extending to all first and self-evident truths, whereas our doubt is particular, extending only to those truths of mediate evidence which need to be demonstrated.

Q. What does the mind aim at in reasoning?

A. It seeks to remove the state of doubt and to assume another state. But doubt excluded, there are no other states but that of probability and certainty. Therefore the mind in reasoning aims at probability and certainty. From this arises the division of reasoning into *probable* and *apodictic*, though strictly speaking the mind in reasoning properly aims at certainty, and at probability only indirectly and incidentally. The reason is this: In probability; as we have said, two elements are found, the adhesion of the mind to the object and the fear of the contrary. Now, the mind when it aims at probability in reasoning is not led to do so from the fear of the opposite, for in this respect probability is akin to doubt, and the mind would shrink from it as it does from doubt. Therefore it aims at probability, to adhere to the truth and to avoid the fear of the opposite. Hence it strictly aims at certainty, which excludes fear and implies firmness of adhesion. When it cannot possibly attain certainty, then it aims at probability; but only indirectly and accidentally. We may, therefore, draw as a general conclusion of the whole article that the mind in reasoning aims at certainty as the proper end of that operation.

ARTICLE THIRD.

*Of the Means which the Mind uses in Reasoning, or
of the Middle Term.*

Q. What is meant by middle term?

A. It is that third idea with which the mind compares the predicate and the subject. It finds it out as follows: When the mind doubts about a proposition it shows that it does not know its truth or its falsehood. Now, to know the truth or falsehood of a proposition does not mean anything else but to know the unity or non-unity of being between the predicate and the subject; or, in other words, to know if the predicate be or not the same as the subject; since the whole form of a proposition consists in telling if the subject be the predicate or not. To reason, therefore, is to endeavor to know the unity or non-unity of being between the subject and the predicate. Hence to find the middle term is nothing else than to find the similitude or agreement between the predicate and the subject. Now, when we want to find out a similitude between two things which is not yet apparent, the way we follow is this: to consider both things from every side, to see if we can find out some common point of resemblance. In the same manner the mind acts when it proceeds to reason; it considers from every point of view the subject and the predicate, to see if it can find some point which may present a similitude with or difference from the other. This point of similitude which it finds first in the one and then in the other, or of difference which it finds in one and not in the other, it assumes as the middle term. Hence to find the middle term we must consider both subject and predicate from every possible side.

Q. What and how many are these sides according

to which we may consider the terms of a proposition, and from them draw the middle term?

A. They are ten; and from the office they fulfil are called *common points*, or *topics*, of argumentation, because the predicate and the subject cannot be considered except from these points of *cause*, *effect*, *subject*, *adjuncts*, *contraries*, *similes*, *name*, *definition*, *division*, and *authority*. From all these we can take the middle term.

Q. Give an example from each.

A. We take the middle term from *cause* when we show the effects from these causes; as, for instance, showing from its material cause that the human body is corruptible; thus, that which is made of matter is corruptible. But the human body is made of matter, therefore it is corruptible.

From the effects we take the middle term, showing the cause from its effects. The most wonderful dramatic productions argue a most powerful imagination. But Shakspeare has produced the most wonderful plays, therefore he must have had the most powerful imagination.

We take the middle term from the subject when we show of the accident something deduced from its subject; for instance, that quality which leans on a more noble subject is in itself more noble. But the qualities of the soul lean on a subject more noble than the body, therefore they are more noble than those of the body.

From the adjuncts or circumstances when we show something from all that surrounds the subject, such as time, place, persons, means, and the like.

From contraries, making one contrary exclude another; as, for instance, Truth is a good of the intellect, therefore falsehood is its evil

From similes, showing one to be like to the other ; as, Americans gained their independence by those virtues which make up pure patriotism, therefore they will continue to preserve it by the same virtues.

We take the middle term from the name in two ways : 1. From its signification ; as, Angel means a messenger, therefore angels are messengers between God and men. From its etymology philosophy means love of wisdom, therefore philosophers love wisdom.

From the definition is drawn the middle term when we argue from those elements which compose it ; as, science is to know a thing from the principles which constitute it. But I know the principles of a certain subject, therefore I have the science of that subject.

From division we take the middle term when we argue from the parts to the whole, and from the whole to the parts. As, for instance, the head, the arms, the hands, the fingers, and all the other parts of the human body are animated, therefore the whole body is animated.

Finally from authority, when we take the middle term from the authority of others.

Q. What criterion must guide us in assuming the middle term ?

A. In assuming the middle term we must pay attention to two rules : 1st, In affirmative propositions the middle term must never be more extensive or ample than the predicate. For instance, to show that man is an animal I could not take the middle term, *substance*, and say : Man is substance ; but the substance is animal, therefore man is an animal. This reasoning proves nothing, because the middle term, *substance*, is much more extensive than animal. Again, the following reasoning would be vain : Peter is a man ;

but John is a man, therefore John is Peter. Here the middle term, man, is more ample than Peter.

2d. On the contrary, in negative propositions the middle term must not be more restricted than the predicate. The following reasoning would, therefore, be bad: The finite is material; but the soul is not material, therefore it is not finite. The reasoning is false because the middle term, material, is taken in a more restricted sense than the predicate, finite. The reason of both rules is found in what we have already said. The middle term is that side of similitude or difference by means of which the predicate agrees with the subject in force or not. But in affirmative propositions the predicate must agree with the subject in all its comprehension; therefore the middle term, which must represent that comprehension, must not be more extensive than the predicate, otherwise it would have less comprehension. On the contrary, in negative propositions the predicate must be denied of the subject in all its extension. Therefore the middle term, which must represent that extension, must not be less extensive than the predicate.

ARTICLE FOURTH.

Of the Use of the Middle Term, or of Figures and Modes.

Q. How is the middle term to be used?

A. The use of an instrument or means consists in making it available for the end for which it has been invented. Now, the middle term is intended for the object of comparing it with the two terms of the proposition by means of the artificial structure of the premises; therefore the proper use of the middle term consists in this comparison and in the artificial struc-

ture of the premises. This comparison may be made in different ways. Because the middle term in that comparison may vary in two ways, either because of the place it occupies in the structure of the reasoning, and of the figure it makes in the premises, now appearing as predicate and now as subject, or because of the manner according to which propositions are formed, negative or affirmative, universal or particular, by the help of the same middle term. The diversity which the structure of the reasoning takes from the figure the middle term makes in the premises is called the *figure* of syllogism; that which arises from the second—that is, the different manner of propositions—is called the *mode* of syllogism. Hence, to understand what and how many are the uses of the middle term we must speak of the figures and modes of syllogism.

Q. What is a figure?

A. *That different disposition which the middle term takes in relation to the extreme terms in the premises.*

This disposition or placing may be made in three different ways. The first is, when the middle term is subject in the major and predicate in the minor, as in this reasoning: Every animal (middle term subject) has a sensitive appetite; but man is an animal (middle term predicate), therefore man has a sensitive appetite.

The second way is, when the middle term acts as predicate in both premises. Every man is endowed with reason; but no horse is endowed with reason; therefore no horse is man.

The third is, when the middle term officiates as subject in both premises; as, for instance, Being is opposed to nothingness. But being is identical with good; therefore good is opposed to nothingness.

There is a fourth figure which can be reduced to the first; therefore we do not speak of it.

Q. What are *modes* ?

A. They may be defined the disposition or locating of the premises according to their universality or particularity, their affirmation or negation.

Q. How many modes can a syllogism have ?

A. Sixty-four ; because every figure can have sixteen modes, since in every figure the premises may be either both universal or both particular, or the major universal and the minor particular ; and each of these modes has four others under it, according to affirmation or negation, because the premises, either universal or particular, may be both affirmative or both negative, or the major negative and the minor affirmative, or *vice versa*. Of all these modes only ten arrive at a conclusion. Each one may amuse himself by enumerating them for exercise.

ARTICLE FIVE.

Of the Deduction of the Consequent from the Premises.

Q. In what manner is the consequence deduced from the premises known by the intellect ?

A. We can gather from all we have said that in reasoning the mind in the major compares the middle term with the predicate, and sees that they agree together ; hence, when in the minor it comes to compare the middle term with the subject, it may be really said to be comparing the predicate with the subject, because it knows and has seen in the major that the predicate is the same as the middle term. In a word, in the minor it sees the predicate in the subject by means of the middle term as through a lens. From this we can conclude how the mind comes to the knowledge of the consequence. Because that which it affirms without hesitation in the consequence it has

already seen in the minor, and would contradict itself if it affirmed in the consequent something contrary to what it has said in the premises. Hence, it has been rightly said that the premises stand to the knowledge of the consequences as the cause to the effect, because the mind, having known the premises, cannot ignore the consequences, as, having supposed the action of the cause, the effect must follow.

ARTICLE SIXTH.

Rules of Reasoning.

Q. How many rules of reasoning are there?

A. The following: 1st. *There cannot be more than three terms in the reasoning.* The reason of the rule may be gathered from all we have said. But here we must observe that oftentimes a fourth term is hidden, and this happens when a term is used equivocally, now in one sense and then in another—as, for instance, the rat is a syllable; but a syllable cannot eat cheese, therefore the rat cannot eat cheese.

2d rule. In the *conclusion no term must be taken in a more extensive sense than it has in the premises*; because that which is more extensive and universal cannot be found in that which is less so. Hence, if the term in the conclusion is taken in a more universal sense, it cannot be found in the premises and could not be deduced from it. Against this rule is that sophism of Cellius: “You are not what I am; but I am a man, therefore you are not a man.”

3d rule. *The middle term should not enter into the conclusion*, because its use consists in comparing it with the other two terms, which is only done in the premises—as, for instance, Napoleon was a general; but Napoleon was poor, therefore Napoleon was a poor

general. Shakspere was a poet; but Shakspere was poor, therefore he was a poor poet.

4th rule. *The middle term must be taken in a universal sense, at least in one of the premises;* because if it was taken in a particular sense in both premises we should have two terms and not one—as, for instance, a certain animal is endowed with reason; but the nightingale is a certain animal, therefore the nightingale is endowed with reason.

5th rule. *No conclusion can be drawn from two negative propositions,* because when both are negative it is clear that the middle term agrees neither with the predicate nor with the subject, and therefore nothing can be concluded from them. Hence the following reasoning would be bad: Man is not eternal; but the animal is not eternal, therefore man is not an animal.

6th rule. *No conclusion can be drawn from two particular premises,* because in this case the middle term would be taken in particular senses in both premises.

7th rule. *The conclusion must share in the fortune of the weaker party;* that is to say, if one of the premises is particular the conclusion must be particular, because otherwise the terms would be more ample in the conclusion than in the premises; if of the premises one is negative, the other affirmative, the conclusion must be negative, because in this second case the middle term agrees with the one and not with the other, and therefore subject and predicate do not agree together.

8th rule. *We cannot draw a negative conclusion from two affirmative premises.* The reason is clear.

CHAPTER II.

DIFFERENT SPECIES OF REASONING.

ARTICLE FIRST.

Of the Variety of Reasonings ; and, first, of the Inductive Syllogism.

Q. Whence arises variety of syllogisms?

A. We must distinguish three things in the middle term: 1. What it is in itself. 2. The connection which it has with the extreme terms. 3. The special form by which they are connected. Because, the middle term must be something in itself, and in order to become the middle term must have some connection with the extreme terms, and also have such connection under a certain form. Now, since the variety of syllogisms originates in the middle term, it is clear that such a variety arises from the three heads just mentioned—that is, from the intrinsic diversity of the middle term, from the different connection it has with the extremes, and from the difference of form.

Q. What is the division arising from the first head?

A. From the first head arises the division of syllogisms into *inductive* and *deductive*, or into *induction* and syllogism properly so called. Because the middle term, considered in itself, may represent either a universal idea or particular ideas; in other words, it may represent a whole from which a part is deduced, or the parts from which the whole arises. In the first case the syllogism is called deductive or syllogism

simply, in the second it is called inductive or induction simply.

Q. What is induction?

A. That kind of reasoning in which, from the enumeration of the particular parts of a subject, is gathered the whole and the universal. For instance, the lion, the horse, the ox, the leopard, man, and the like are sensitive. But all these constitute the genus animal; therefore the genus animal is sensitive.

Induction may be of two kinds, complete and incomplete, because the enumeration of the particulars may be complete or incomplete, and according as it is the one or the other induction is complete or incomplete.

Q. What is to be observed as to the incomplete induction?

A. We must carefully observe in what sense we can say that the enumeration of its parts is not complete. Because if by this it is meant to convey the idea that from an incomplete enumeration of parts we can draw a general consequence without adding to or supposing anything more in that incomplete enumeration, as some modern logicians have thought, it is false, and would be contrary to that rule of reasoning which forbids the consequence to have a greater extension than the premises. The whole is certainly more ample and universal than some of its parts. But in the incomplete induction, according to these logicians, the consequence contains the whole because universal, and the premises contain only some parts because the induction is incomplete; therefore the incomplete induction, as it is explained by some modern logicians, is repugnant to the fundamental rules of syllogisms, because in it the consequence is more ample than the premises. Therefore, in order

to avoid such inconvenient, if the enumeration of parts is not complete it must be made so in some way. This is done by adding after the incomplete enumeration of parts the phrases *and so forth, and the like*, as the ancients observed, who held that induction could conclude nothing except to the enumeration of parts one could add and *so on of the rest*.

Q. For what reason and upon what foundation could you add *and so on of the rest*?

A. That phrase is added in force of the principles of analogy, *that nature is limited to one thing; that nature, when not prevented, works always in the same manner*. Upon this, having observed that a certain property is constantly found in many individuals, we become assured that it belongs to their nature; and because nature works always in the same way in all individuals, we attribute the same property to the rest of the individuals not mentioned in the enumerations. The true difference, therefore, between complete and incomplete induction is this: that in the first the enumeration of parts is actually complete; in the other it is not actually complete, but becomes so by means of the phrases, and *so on with the rest, and the like*.

Q. What is the principle on which both deductions rest?

A. *That which agrees or disagrees with all the particulars implied in the idea of the subject agrees or disagrees with the subject taken as a whole or universally.*

Q. What has Bacon done with regard to induction?

A. Modern philosophers sing loudly the praises of Bacon for the services he has rendered to philosophy in teaching the inductive process. But we have to observe that he has done nothing as to the logical form of induction which was not known and taught by the ancients. All that Bacon has done is to point

out the way how to proceed in the observation of particular facts by way of negation and affirmation, so that truly he has treated only of the most common part of induction.

ARTICLE SECOND.

Of Deductive Syllogism and its Species.

Q. What is deductive syllogism?

A. If, in reasoning, instead of particulars we take the universal as the middle term, then we have the inductive syllogism, or syllogism properly so called, which may be defined *that reasoning in which from the universal is deduced the particular contained in it*—for instance, Every animal is sensitive; but man is an animal, therefore he is sensitive.

Q. How many kinds of syllogisms are there?

A. Several. 1. The syllogism *à priori* and *à posteriori*. The first is that in which the middle term is something which by its nature is understood before that which it is intended to demonstrate, and acts as the cause of that which is demonstrated. Hence it is called also from the *cause*—for instance, every being endowed with reason has a will; but man is endowed with reason, therefore he has a will. Here the middle term, *reason*, is the true cause of the will, as reason is a rational tendency. The second is when we assume as middle term something which is conceived by the mind as posterior to the thing which we want to demonstrate, as when we prove a thing from its effects or properties.

2. Syllogisms from the *proximate reason* and from the *remote reason*. The first is that in which the middle term contains the proximate and adequate reason of the thing. The second is that in which the middle term contains only the remote cause of the thing.

3. *Direct* and *indirect* syllogisms. The first is that in which the middle term contains a truth which has some connection with the proposition to be demonstrated. It is called indirect when, having supposed, as hypothesis, the contrary proposition, we take as middle term an absurdity, and show that the absurdity proceeds from that hypothesis. It is called also demonstration from absurd consequences. For instance, wishing to demonstrate the free will of man, we take as middle term the absurdities which would follow from the denial of it—for instance, the destruction of virtue, of reward and penalty, etc.

4. Syllogisms from statements admitted by adversaries, called *ex datis*, and it is that in which the middle term is something admitted by the adversary.

ARTICLE THIRD.

Of Demonstrative or Apodictic, and Probable Syllogisms.

Q. What is the next thing to be considered in the middle term, and what division of the syllogisms arises therefrom?

A. The next thing to be considered in the middle term is the connection it has with the extremes, and from this arises another division of the syllogism—that of demonstrative and probable. This division of the syllogism is made from its efficacy in demonstrating a truth. But the efficacy of reasoning results from the connection which the middle term has with the extremes; therefore this division of the syllogism into demonstrative and probable depends on the connection which the middle term has with the extremes. Thus, in order to have a demonstrative syllogism, it is necessary that the middle term should be so connected with the extremes as to contain the *proximate, necessary, and*

proper cause of a thing. Cause, since the syllogism is intended to produce science, that is, knowledge certain, necessary, and evident. But science is knowledge deduced from its cause; therefore the middle term of the demonstrative syllogism must contain the cause. This cause must be necessary, because, if it were accidental, the conclusion would not be necessary, and hence unscientific. It must be the proper cause, because a common cause would belong not only to the thing we want to demonstrate, but also to others, and therefore could produce only probable knowledge. It must be the proximate cause, since the remote cause would give but an inadequate knowledge.

Q. What is probable syllogism, and by what criterion may we distinguish it from the other?

A. The syllogism is called probable when its middle term has no necessary connection with the extremes—as, for instance, when the middle term is drawn from etymology, from authority, from a common cause, from effects not necessarily connected with that reason alone and such as can originate in some other cause, etc., or from some accident, etc. By keeping in view all these things one can have a criterion to distinguish the probable from the demonstrative syllogism.

ARTICLE FOURTH.

Of Categorical and Hypothetical Syllogisms.

Q. Define these two kinds of syllogisms.

A. The connection of the middle term with the extremes must be put in a special form. Now, generally speaking, the middle term may be connected with the extremes in two forms, either in an absolute way or conditionally; hence the division of syllogisms into categorical and conditional or hypothetical.

The categorical or absolute syllogism is that in which the middle term is connected with the extremes in an absolute way. The conditional is that in which the middle term is connected by way of a conditional proposition in the major. Moderns call the first simple and the second composite.

Q. What are the species of conditional syllogisms?

A. A conditional syllogism is that in which the middle term in the major is bound by a certain condition. Therefore this syllogism may be of as many kinds as there are ways in which a term may be bound to another by way of condition—that is to say, as there are species of conditional propositions. Now, these propositions are of three kinds—*connex*, *conjunctive*, and *disjunctive*. Therefore there are three kinds of conditional syllogism—*connex*, *conjunctive*, and *disjunctive*.

The first is that in which the major is a *connex* proposition. For instance, If the soul is a spiritual principle, it is immortal; but the soul is a spiritual principle, therefore it is immortal.

The second is that in which the major is a *conjunctive* proposition; as, One cannot sleep and be awake at the same time; but John is asleep, therefore he is not awake.

The third is that in which the major is a *disjunctive* proposition; as, Peter is either alive or dead; but he is alive, therefore he is not dead.

CHAPTER III.

OF THE EXPRESSION OF REASONING.

ARTICLE FIRST.

Different Ways of Expressing a Reasoning.

Q. Define the different ways of giving expression to reasoning.

A. Besides syllogism and induction, of which we have spoken, there are the enthymeme, the epichirema, the sorites, the prosyllogism, and the dilemma.

Oftentimes in reasoning the premises are so easy and clear that we omit one of them—as, Virtue is the greatest good in the world; therefore it should be practised. Here the major is left out; that is, that which is the greatest good should be practised. When the reasoning is so expressed it is called enthymeme. On the contrary, we have the epichirema when to one or both premises we add proof—as, Idleness is hurtful because the parent of all vices. But what is hurtful should be avoided, therefore idleness should be avoided.

The sorites is a reasoning composed of several propositions, so arranged that the predicate of the first is the subject of the second, and so on until in the consequence the predicate of the first proposition is united with the subject of the last—as, Truth is the object of the intellect. That which is the object of the intellect perfects it. That which perfects the intellect is the proper good of man. That which is the proper

good of man is to be followed. Therefore truth is to be followed.

The prosyllogism is the union of two syllogisms so connected together that the consequence of the first officiates as the major of the second. For instance, Sensible goods do not fully satisfy human aspirations; but that which does not fully satisfy human aspirations is not the true happiness of a man, therefore reasonable goods are the true happiness of man. But that which is not man's true happiness must not be exclusively sought for; therefore sensible goods must not be exclusively sought for.

The dilemma is a syllogism which has for its major a disjunctive proposition, and from each of the members of which we endeavor to draw a conclusion against the adversary. For instance: Christianity was either propagated by the force of miracles or without miracles. If it was propagated by miracles, it is divine; if it was not propagated by miracles, this is the greatest of all miracles, that a religion opposed by the whole world and contradicting all human passions should subdue this world and should be propagated all over by twelve rude and ignorant fishermen.

All these expressions of reasoning can be reduced to the syllogism, as one can easily see by himself; as, for instance, the dilemma given above may be reduced to the following syllogisms: If the Christian religion was propagated by means of miracles it is divine. But it was propagated by means of miracles, therefore it is divine. The minor is proved by this other syllogism: If we deny that miracles propagated it, we must account for that propagation effected without miracles. But this would be a greater miracle under the circumstances; therefore the Christian religion was propagated by means of miracles.

CHAPTER IV.

FAULTS OF REASONING.

ARTICLE FIRST.

Sophistries of Thought.

Q. What is a sophism?

A. Reasoning is intended to bring us to the knowledge of the truth; therefore it is fallacious when under the appearance of truth it insinuates falsehood. This fault is called sophism. This insinuation of falsehood under the appearance of truth may arise from two sources: either from the *form* when the rules laid down to construct reasoning are not kept, or from the *matter* when this is in reality false but appears under the garb of truth. We shall say nothing of the fallacies originating from the form, as they can be easily detected by means of the rules laid down. We shall therefore speak of the faults proceeding from the matter. These may be divided into two, fallacies of thought and fallacies of words.

Q. Speak of each of them.

A. Among the fallacies of thoughts the first is that called of *accident*, which occurs when we attribute to a subject a predicate as substantial and necessary when it only agrees with it accidentally. For instance, Reason is oftentimes faulty, therefore it is an evil.

The next is the fallacy of passing from the absolute to the relative, and *vice versâ*. It is committed when we attribute something to the subject in an absolute and

unconditional manner when it may be attributed to it only under certain respects and conditions; as, Medicine gives health to the body, therefore it should always be taken.

3. The fallacy of *false cause*. This is perpetrated when we assign as the cause of something that which is not really so; as, The soul united to the body thinks, therefore the soul separated from the body cannot think.

4. *Begging the question or principle*. This is committed when we assume as the premises of reasoning that which must be proved, though we use different words—as, The human soul is imperishable, therefore it is immortal.

5. The *ignorantia elenchi*. It is incurred when the adversary tries to evade the question and to find a contradiction against our statement which is really not to be found therein.

6. Fallacy of *many questions*. This is committed when the adversary, to the many interrogations which he heaps one upon the other, wants a single answer, either affirmative or negative, whereas, in order to answer properly, it would be necessary to distinguish and give an answer to each question in particular.

ARTICLE SECOND.

Fallacies of Words.

Q. What are the fallacies of words?

A. 1. Figure of *expression*. This proceeds from the fact that an expression may seem like to another when in reality it is not.

2. *Equivocation*—when we make use of an ambiguous term in the same argument.

3. Fallacy of pronunciation, when we use promis-

cuously a word which by a slight variety of pronun-
 ciation may be made to signify different things.

4. Amphibology—when, in consequence of the
 structure and placing of words—there arises an am-
 biguous sense which may be applied to one or to the
 contrary part. For instance, that answer given by the
 oracle of Apollon to Pyrrhus, King of Epirus: *Aio te*
Æacida Romanos vincere posse (“Pyrrhus the Romans
 shall, I say, subdue”)—which closely resembles, as
 Shakspeare remarks, the witch prophecy, “The duke
 yet lives that Henry shall depose.”

5. Fallacy of *composition*. This is committed when
 that which is only true in a divided sense is taken in a
 composite sense—as, Every man can live and die.

6. Fallacy of division. This is the contrary of that
 of composition, and is committed when that which
 is true in a composite sense is used in a divided sense.

Q. How are fallacies refuted?

A. If the syllogism be false in the matter, then we
 must deny that proposition which contains falsehood.
 If it be faulty because the fallacy renders the sense
 ambiguous, then we must clear up the meaning of that
 proposition which presents the ambiguity.

PART THIRD.

END OF REASONING.

Q. OF what shall we treat in the third part of logic?

A. The end of reasoning being certainty or science, since a knowledge which is certain and acquired by reasoning is called science, it follows that we must speak of science in this third part. But in science we must distinguish two things—that which is properly so called and the way by which we arrive at it, which is called *method*. Therefore, in treating of science we must speak of science and of method. And because in everything we find first the way to it and then the thing itself, therefore we shall speak of method first and then of science. We shall treat of method in three chapters: 1, its nature and necessity; 2, its elements and means; 3, its divisions.

CHAPTER I.

OF THE NATURE AND THE NECESSITY OF METHOD.

ARTICLE FIRST.

Definition and Necessity of Method in general.

Q. Define method and its nature.

A. If science is to be acquired by means of reasoning, it is evident that it is hidden and far from us, and

that we arrive at it by a slow process of the mind. Now, that which is far away and is acquired slowly by a process of the mind supposes a way which leads to it; therefore science supposes a way which leads to it. This way is called method, which may be defined *that way or order which the mind follows in the acquisition of science.*

From this definition it appears what things are necessary to have method, and in what the nature of the latter properly consists. The method is a way or road. Now, we find three things in a road—the starting-point, the term at which we arrive, and the means, which lies between the two. Three things, likewise, are necessary in method: the principle, from which it starts, the means, and the end. The principle or principles, which may be different and various, are those truths, of immediate evidence, and indemonstrable, which are always supposed in science, and which are taken as a starting-point, and may be *of fact* and *of reason*: of fact—as, *The world exists*; of reason—as, *Nothing can be and not be at the same time.* The end, or term, is science, because it is that which method aims at. The means is that order or process of acts which the mind pursues to arrive, from the principles, at science.

Now, the nature of method does not consist in the principles or the end but in the process, because, as to the principles, they must be already known; as to the term—that is, Science, or the acquisition of truth—this follows, and is a consequence of, the method. Therefore, strictly speaking, the nature of method lies in the order and process of the mind.

Q. What is the difference between method and reasoning?

A. A doubt might arise from what we have said whether method and reasoning be not the same thing;

because if method is a process, so is reasoning; if method arrives at science by that process so does reasoning; if method starts from indemonstrable principles, so does reasoning. In what, then, are they distinguished from each other? To answer this question we must distinguish with St. Thomas * two kinds of processes in human science: "The first is a process of succession (and time), as when, after having considered one thing, we turn around to consider another, and thus complete our first knowledge. The other process is by way of causality, when from the principles we draw conclusions which naturally originate from them." The first process is that of one who views a variety of objects one after the other; the second is that of one who considers the light as springing from the sun, the flower as budding from the tree, etc. The first process is method; the second is reasoning.

Q. Is method necessary?

A. By the nature of our mind we are so constituted that we cannot understand everything at once and simultaneously, but must understand things successively, and part after part. Now, to do this well we must follow an order of some kind. Therefore it is necessary, in order to acquire science, to follow a certain order. But the essence of method lies just in this order; therefore method is necessary.

ARTICLE SECOND.

Method must be One and Definite—Eclecticism.

Q. What can you say of the eclecticism of Cousin?

A. This philosopher has broached a very strange theory about method. He maintains that pure error is not to be found in the human mind, and that error

* 1 p. qu. 14, art. 7.

is an incomplete truth. From this he concludes that all the erroneous systems of philosophers cannot be called so in the sense that they do not contain any truth at all, but only in the sense that they contain truth in an incomplete manner. This truth, in the long succession of centuries up to our times, has already been exhausted by philosophers, some of them presenting one part and some another, but none exhibiting the whole truth. Hence we cannot find any new truth; but our business is to gather the truths scattered here and there. From these statements he concludes that it is not proper to have any determinate and definite system in the nineteenth century, but that we should gather all that is good and true here and there in every system, and, rejecting the false, endeavor to reconcile all systems. This sort of method is called *eclecticism*.

Now, without entering into the examination of the principles assumed—that pure error is impossible, that error is an incomplete truth; for this shall be done in *Metaphysics*—we say that this theory is contradictory, because at the same time that it rejects all sorts of method it supposes already a definite method. Because how could the mind gather the truth here and there in this system or in the other, separate it from falsehood, and keep the one and reject the other, without a rule to guide it in this selection and discrimination? Now, this rule guiding the mind in this process implies a method. Therefore eclecticism, which rejects all method, supposes a method. We conclude, therefore, that a method is necessary to acquire science, and that this must be definite. In fact, a method must start from a definite point. Now, a definite point of starting renders the way also definite. Method, therefore, must be one and definite.

ARTICLE THIRD.

Q. How can we determine the true method?

A. This is a very difficult question, and cannot be answered here in consequence of the many controversies which have arisen on the point, and to answer which more knowledge of philosophy is needed than we hitherto acquired. We must, therefore, leave the answer to this question for another part of this work. Here we shall give those essential characteristics which must accompany a true method, whatever it may be. Now, the first essential character of true method is that *it must be agreeable to the nature of our intellectual faculties*. Because method is that process which our mind follows in the acquisition of truth. But our mind and our intellectual faculties in the acquisition of truth follow always that way which is natural to them; therefore true method must be agreeable to the nature of our mind. Moreover, method is a guide and a help to lead our faculties to science. But a guide contrary to the nature and faculties of a being would be a hindrance rather than a help; therefore true method should be agreeable to the nature of our faculties.

From this it follows that a true method must proceed after these laws: 1. In the investigation of truth it must start from that which is *better known* to come to that which is *less known*. This law is clear, and we shall only explain what is meant by it. That which is more knowable may be understood in two ways—in *itself and according to its nature*, or in *relation to our mind*. A thing is called *better known in itself and according to its nature* when it is naturally first and more perfect than another, as the cause with regard to its effects. Hence God, who is most per-

fect and necessary, is, according to his nature, the most knowable of all beings. But oftentimes that which is most knowable according to its nature is less known in regard to us—as, for instance, some cause which, according to its nature, is always more knowable than its effects, may, with regard to us, be less known than its effects. Now, in the law laid down, when we say that we must proceed from that which is better known to that which is less known, we mean with regard to what is better known to our mind, and not with regard to that which is better known in itself and by its own nature. The reason is easily understood. In every road the starting-point is that which is nearer to the one who is to go. But the method is the road of our mind; therefore its starting-point should be that which is nearer to, and *better known with regard to it*.

The second law is that the mind should proceed from the better known to the less known gradually, and not by leaps; because the last conclusion results from the preceding conclusions, and hence the knowledge of the last conclusion is the effect of the preceding conclusions. Whenever one of them is missing the knowledge of our mind is no longer perfect.

The third law prescribes that between the various gradations and conclusions there should be a *connection*.

CHAPTER II.

ELEMENTS AND MEANS OF METHOD.

ARTICLE FIRST.

Of the Elements of Method ; and, first, of Analysis and Synthesis.

Q. What are the elements of method ?

A. The essence of method, as we have seen, consists not in the principles from which it starts, nor in the term where it ends, but in that process by which from the principles we arrive at the end. Now, this process implies an order of operations which must be gone through to obtain an end. The elements of method, therefore, are those operations by which the mind, by means of reasoning, arrives at science.

Q. How many of these operations are there ?

A. Two, analysis and synthesis. The first is that act of the mind which resolves a certain subject into its elements ; and because we cannot resolve anything except it is composite, therefore analysis is that operation of the mind which travels from the composite to the simple. And, again, because the whole is more complex than its parts, the effect more complex than the cause, the particular more complex than the universal, the example more so than the rule, and the fact more so than the principle, hence analysis, after all, is that operation which travels from the whole to the parts, from the effects to the cause, from the particular to the universal, from the example to the rule, from the facts to the principle. Thus, when the natural

philosopher, from the experience of natural phenomena, discovers a law, he proceeds by way of analysis; when an artist, from the various examples, draws a rule, he also makes use of analysis.

The following lines of Pope are a specimen of the finest analysis. He wants to prove the superiority of reason over the senses, as he states in the first two lines:

“Far as creation’s ample range extends,
The scale of sensual, mental powers ascends.”

And he proves it by the following analysis:

“Mark how it mounts to man’s imperial race,
From the green myriads in the peopled grass;
What modes of sight betwixt each wide extreme,
The mole’s dim curtain and the lynx’s beam;
Of smell, the headlong lioness between,
And hound, sagacious, on the tainted green;
Of hearing, from the life that fills the flood,
To that which warbles through the vernal wood;
The spider’s touch, how exquisitely fine!
Feels at each thread, and lives along the line;
In the wise bee what sense so subtly true
From poisonous herbs extracts the healing dew!
How instinct varies in the grovelling swine,
Compared, half-reasoning elephant, with thine!
’Twixt that and reason, what nice barrier,
For ever separate, yet for ever near!
Remembrance and reflection, how allied;
What thin partitions sense from thought divide!
And middle natures, how they long to join,
Yet never pass the insuperable line!
Without this just gradation could they be
Subjected, these to those, or all to thee?
The powers of all subdued by thee alone,
Is not thy reason all these powers in one?”

—*Essay on Man.*

Synthesis is the opposite of analysis. It means composition. But only the simple is put together. Hence synthesis, after all, means that act of the mind

which proceeds from the simple to the composite; and as the parts are more simple than the whole, the cause more simple than the effect, the universal more so than the particular, the principle more so than the fact, the rule more so than the example, hence we have the operation called *synthesis*, when from the parts we go to the whole, from the cause to the effect, from the universal to the particular, from the principle to the fact, from the rule to the examples.

ARTICLE SECOND.

Use of Analysis and Synthesis.

Q. When and how must these two operations be used?

A. A great dispute has arisen among philosophers as to when and how to use these two operations; some wanting to use synthesis first, and then analysis, and others wanting to use analysis first, and synthesis afterwards. To resolve this question we must observe, in the first place, that when the mind sets out to investigate an object, it must know it somewhat, at least confusedly; because if it knew it not it would not set out upon its investigation.

2. In force of the nature of our intellect, this object to be investigated must be presented before it in a complex state.

3. The mind truly knows it when it knows all its parts and the manner by which they are knit together. If this last observation needed any proof it might be demonstrated thus: Then only have we a true knowledge when it corresponds to the *reality* of the object. Now, to get at the reality of an object which is complex two things are required; the parts and their union, made according to the nature of the

object. Therefore it is only when we know the parts of a complex object, and the manner after which they are knit together, that we can be said to have true knowledge of it.

Having premised these things, we come to the solution of the question, Which must we use first in the acquisition of science, synthesis or analysis? We say, in the first place, that it is impossible not to make use of analysis in science; because, when we come to know and to distinguish the parts of a whole apprehended in a confused manner at first, the process which we follow is analytic. Again, it is impossible not to use synthesis; because, to have a perfect knowledge of a whole, it is not sufficient to know its parts, but it is necessary to know how they lie to each other and to the whole. This process, as it is evident, is synthetic; therefore in science we must use both.

Besides, we are so made by nature that our knowledge ordinarily begins from experience and from facts, and from them arises to principles. Now, this is analysis. On the other hand, experience is not sufficient to give us science, because it does nothing more than to affirm a fact; hence we stand in need of synthesis also, which shows the connection of facts with principles; therefore science needs both these operations. The second question is, How are they to be used, supposing that they are both necessary?

We have said that the first thing we do after that confused knowledge of an object is to separate and distinguish the parts, and then we study the manner in which they are used. Therefore we begin first by analysis and then use synthesis. Again, we have said that our knowledge starts from experience. Now, experience implies analysis; therefore in science we begin first from analysis. This, of course, is under-

stood in a subjective sense, inasmuch as science is an act of our mind, but not inasmuch as when, after having acquired science, we wish to impart it to others. In that case we use analysis first and synthesis afterwards, or *vica versa*, just as we see it more conducive to our object of imparting it.

ARTICLE THIRD.

On Definition

Q. What is definition?

A. Whatever may be the starting-point of our minds, either analysis or synthesis, it must have some fixed limits, in order not to be too much distracted and wandering about. These limits are appointed by definition and division.

Definition is a short discourse which declares what is that of which we are treating. It may declare a name or a thing, and hence is distinguished into *nominal* and *real*. It is called *nominal* when it explains the signification of a name; *real* when it manifests the nature of the thing signified by the name. Both may be formed in different ways, and, therefore, are of different kinds. The nominal definition may be formed in three different ways: 1. From the etymology, as when we say, *The word philosophy means love of wisdom*. 2. From the common use in which a word is taken—as, *A wise man is understood by all to mean one who judges from the standpoint of the highest causes*. 3. From our special signification—as, *I mean by eloquence the present impassioned state of my soul transfused into words*.

A real definition may be also formed in three ways: 1. By giving the essential constituents of a being; as, *Man is a reasonable animal*. 2. By explaining the man-

ner in which it has been produced ; as, The circle is a figure described by the extremity of a straight line turning upon the other fixed extremity. This is called *genetic* definition. 3. By describing the thing by its most important accidents and exterior causes ; as, Man is an animal, provident, sagacious, full of reason and counsel. This is called descriptive and is used in oratory. The nominal definition must always precede the real, it being of the utmost importance in a dispute to be agreed upon the signification of the terms used. But to determine the nature of a thing the real definition is the most important and necessary to a methodic process.

Q. Give the laws of definition.

A. 1. *The definition must be clearer than that which is defined*, because the whole object of the definition is just this.

2. *The thing defined must not enter into the definition, at least under the same respect in which it is defined*, otherwise we should declare the unknown by the unknown.

3. *It must be convertible with the thing defined.*

4. *It must be formed from the proximate genus and the specific difference of the thing to be defined*, because the definition must fix the proper limits of a being. Now, every being agrees in some things with other beings and disagrees in other things ; therefore a definition must express that in which the object defined agrees with others and that in which it differs from them. This is done by using the proximate genus and the specific difference.

ARTICLE FOURTH.

Of Division.

Q. What is division, and how many kinds of divisions are there ?

A. Division is the distribution of a whole into its parts ; it is of as many kinds as we may suppose a whole to be. Now, a whole can be so actually or potentially. It is actually so when it is really composed of parts, which may be *physical*, as in a house the walls, the roof, etc.; *metaphysical*, as in man animality and rationality ; *accidental*, as the modifications of a being ; *logical*, when they are supposed by the mind.

It is potentially so when it actually has no parts, but can have them as the universal relatively to the particular ; genus, for instance, respectively to species ; because, though genus actually does not contain the species, yet it may be divided according to the species, as animals may be divided into reasonable and unreasonable. Division, therefore, may distribute the actual and the potential whole.

Q. What are the laws of division ?

A. The following: 1. It must be entire ; that is, that no part of the subject must be left out, so that all the parts put together may be equal to the whole.

2. The parts must be somewhat opposed to each other, so that the one does not contain the other.

3. The division should be effected in an orderly way ; that is, a subject should be divided first in its more general parts, and these in their turn subdivided, and so on.

4. It should not be too minute, which would engender confusion.

CHAPTER III.

DIVISION OF METHOD—THAT IS, OF METHOD OF INVENTION AND OF DISCIPLINE.

Q. How many kinds of method are there?

A. Two, method of invention and method of discipline. We can attain science in two ways: either by discovering it ourselves or by learning it from one who has already found it. The first is called method of invention; the other, of discipline.

Q. What are the truths which the intellect may discover?

A. Four questions may always be raised upon a subject: 1. Whether it exists? 2. What is it? 3. What are its qualities? 4. What originates its existence, and for what does it exist? Hence there are four truths which may be discovered in a subject: existence, essence and nature, qualities, and the causes of existence. Of these four truths two properly belong to science: What is it, and from whence comes it, and why? That is the essence and the efficient and final cause of a thing. The others are subject to experience, and are a way to science, but not science itself.

Q. What are the means to obtain truth?

A. They can be of two kinds, direct and indirect, because we can either discover truth by ourselves or learn it from others; the first is called direct, the other indirect. The direct may belong to sensitive and to intellectual knowledge. Now, using these two means to arrive at science, two things may happen:

either we arrive at the knowledge of the principles and of the nature of a thing or we do not. If the first, then our mind is satisfied and rests ; if the second, the mind, to be satisfied, seeks some other means, and supposes a principle which may explain all the accidents of the subject. and which may fulfil the office of its nature for the time being until it succeeds really to find it out. This supposed principle is called *hypothesis*.

Such is the way which the mind follows in the pursuit of truth. Of the senses and of the intellect, and of their value as means of truth, and of the indirect means—that is, the testimony of others—we shall speak in another place. Here we shall say a few words with regard to experience and to hypothesis.

Q. What is experience, and what are its laws ?

A. Experience has often been confounded with observation. To observe is to look at the facts just as they happen, and nothing more, whereas experience means always a certain knowledge of some properties revealed by observation. Hence is it that, though observation is satisfied with one fact, experience requires several, and most rarely is satisfied with one, and when this happens the fact must be of the highest importance and equivalent to many facts. This is the reason also why the word experience has been extended not only to mean the gathering of a property of an object from the observation of many facts, but is used to mean the artificial reproduction of facts to force, as it were, the object more clearly to reveal its properties. Thus chemists, for instance, make experiments by reproducing facts and phenomena to force the object to reveal itself. In one word, experience and experiment are ordained to gather from the observation of facts the properties and qualities of beings.

The laws which must guide us in the experience of facts are: 1. We must pay attention to the least circumstances of place, of time, of manner, because the least influence of these things causes a variation in the experiment. 2. We must repeat and vary the experiment, try it with other instruments and under different circumstances, oftentimes using a contrary process, in order that the phenomenon may be known under all its aspects. 3. We must protract the experiment for a certain time, and pay attention to those more constant and stable effects and conditions which may accompany the phenomenon. These laws require the utmost diligence in their observation, and the greatest patience in continuing them.

Q. What is hypothesis, and what are its laws?

A. We have said that oftentimes, in spite of all our constancy in experimenting, we cannot find the principle and reason of a phenomenon. Then we put forth a principle which may better explain it; this is called hypothesis, which may be defined: *A probable opinion put forth to explain the nature and reason of a phenomenon, which nature and reason are not known by experience, nor as yet demonstrated by reason.* The laws are: 1. We must only take as an hypothesis that principle which may explain most of the circumstances, and these the most important.

2. That it contain nothing repugnant to the laws of nature already known.

3. That, among the hypotheses, should be chosen which proceeds in the most simple way.

If in the prosecution of the experiments we find out that that hypothesis explains the true nature of the phenomenon, then the probability becomes certainty and the hypothesis becomes thesis.

ARTICLE SECOND.

Of the Method of Discipline.

Q. What is meant by teaching?

A. When science is found the method employed to communicate it to others is called didactic, or of discipline. In order to understand the nature of this method we must see what it is to teach science.

To teach is to manifest the science which we know, and to cause others to learn it. But to know, in a scientific way, means to deduce a conclusion from principles certain and evident; therefore to teach science implies inducing the mind of the pupil to draw consequences from known principles. Hence it appears that the teacher is not the principal cause of the science in the disciple, but a guide who, by means of signs—that is, words—leads the disciple and induces him to draw conclusions from known principles in the same manner as he drew them himself. Hence the principle or cause of the science in this case is not the teacher but the reason of the disciple.

From this appears the strangeness of the opinion of those who hold that the analytic method is good to discover science, the synthetic to impart it. We say that in general the best method of teaching science is the same one which discovered it. Because to teach is to incite the mind of the disciple to form those same demonstrations which are in our mind; therefore the easiest method is the same followed by us in the formation of those demonstrations.

Besides, between the method of invention and that of discipline exists the same difference which intervenes between nature and art, because the inventive method is natural, that of discipline is artificial. But art must imitate nature; therefore the

method of discipline must imitate the method of invention.

This, however, must not be understood so strictly as to forbid the use of any other method. The best rule in this matter is, that method is the best which best facilitates the acquisition of science, and therefore when the analytic answers the purpose let the analytic be followed ; when the synthetic, let the latter be followed, because the easiest and the clearest way is always the most natural.

CHAPTER IV.

OF SCIENCE, ACCORDING TO ITS STRICTEST ACCEPTATION,
INASMUCH AS IT IS KNOWLEDGE.

ARTICLE FIRST.

Idea of Science.

Q. In how many ways can the word science be used?

A. In two ways, though both are connected together. In the first place, science implies a particular knowledge of an object. But our mind can have also several distinct ideas of an object, and form several distinct conclusions about it, which it may put together in order and form a whole body of knowledge. Hence, in the second place, science may be used also to express that orderly series of scientific knowledge we form about an object. In this chapter we shall treat of science in the first signification, leaving it to the next to treat of it in its second acceptance.

Q. Give an idea of science inasmuch as it is a special knowledge of an object.

A. It is called a *special* knowledge of a set purpose, because science does not mean any knowledge whatever, but only a perfect knowledge. This sense is attached to science even by common sense, because men generally attach a different sense to the word knowledge and to that of science, meaning by the latter a fuller, more evident, and more noble knowledge. Science, therefore, implies a perfect knowledge. From this idea we can draw the elements necessary and essential to the conception of science, because

three things are necessary to have a perfect knowledge:

1. It must be certain, because, besides certainty, there is nothing but doubt and probability, or opinion. But doubt is the want of knowledge, and probability is an imperfect knowledge, always implying a certain fear of the contrary; therefore we can call perfect only that knowledge which is accompanied by a certainty.
2. It must be evident, either mediately or immediately; because, if knowledge is certain, it is necessary that the mind should have no fear of the contrary. To have no fear of the contrary the mind must feel perfectly secure about it. To feel perfectly secure it is necessary that it should see clearly into the principles on which it is founded, and discover the connection between those principles and the conclusions drawn from them; therefore science must be evident knowledge. Moreover, if this knowledge were not evident but obscure, it would not be perfect but imperfect.
3. It must be a knowledge deduced from its causes, because otherwise it could be neither certain, evident, nor perfect—not certain, because then only can we be said to have certainty when not only do we know that a thing *is* but also that it *must be so*, which absolutely excludes all fear of the opposite. But the necessity that a thing must be so is only known when we discover the cause and the connection which it has with it. Therefore knowledge, to be certain, must be deduced from its causes. It could not be evident, because when the mind can see no connection between a thing and its cause it cannot have true evidence, as it can see a void, and never can rest until it discovers that connection. It could not be perfect, since that knowledge alone is perfect which leaves nothing to discover, and when we know not the cause of a thing we cannot say that there is nothing more

to discover; therefore science must be a knowledge deduced from its principles.

Q. Give a full definition of science according to the above principles.

A. A knowledge, certain and evident, deduced from its principles or causes. Here a difficulty might be raised. We cannot always investigate the cause of an object, and yet we can have a scientific knowledge of it. For instance, God has no cause, and yet we can have the science of Him, which is called Theology.

In answer to this difficulty we say that when we cannot investigate the cause of an object, in that case the knowledge of its effects performs the office of the cause, as when we say God exists because He has created the world, God is most perfect because He is the cause of all the perfections of creatures; here the knowledge of the effect performs the office of cause.

Q. How can we make the effect officiate as cause? Is not this contradictory?

A. When a cause has produced a certain effect, it has imposed the necessity of its own existence for having produced that effect, and of its being such by nature as the effect produced requires; because as, on one side, the effect must necessarily exist since the cause has acted, and must be such, and not otherwise, as the cause has made it, so likewise, on the other hand, the cause must necessarily exist because its effects exist; it must necessarily have produced it, because the effect is already produced, and must necessarily be so-and-so, because the effect is so-and-so, and not otherwise. Therefore in this case the effect performs the office of cause in the construction of science, since we can argue from a certain effect the existence of the cause, its being produced

by the cause, and somewhat the nature of the cause. Hence St. Thomas has observed that when we demonstrate the cause by its effects, then the effect officiates as the cause, and the definition of the effect is given instead of that of the cause. Here we must observe that we do not say that the effect is the cause of the existence of the cause, as Hegel objected with regard to the demonstration of the existence of God from His effects. We only say that the effect merely officiates as the cause in the demonstration, inasmuch as we have said every effect necessarily supposes a cause, and such a cause as befits the effect; and, therefore, supposing the existence of the effect, the cause also must exist, and be such as the effect requires. Besides, by the same cause we do not merely understand the efficient and the final causes, but also the principles essential to a being, which form it, which may be reduced to the formal cause. But the essential principles of a being may be easily read and discovered in their effects more or less, according as the effect approaches the cause and equals its power, as we must find the similitude of the cause in its effect. Therefore, even when we demonstrate from effects, science is knowledge from its causes. It may not be quite perfect, but it is science for all that, because containing all the elements of science.

Q. What must you observe as to the object of science?

A. 1. Science must have for its object the essence and the immutable relations of the essence of things. It must have for its object the essence, because science is knowledge certain and universal. But such knowledge must have an object, which cannot be otherwise than immutable; therefore the object of science must be immutable. But only essences are immutable;

therefore the object of science must be the essences of things.

Of these essences we must know the elements and their immutable relations, because science lies in the knowledge of the connection and relation between effects and their causes. But we could not know this connection between effects and their causes without knowing the elements and the immutable relations of the essences of things; therefore, etc.

The second observation is in relation to what is necessary in the intelligent subject in order to have scientific knowledge. Because it is not necessary, in order to have a scientific knowledge of an object, to have been able to produce it, as was asserted by Vico, who held that the intellect *knows only what it does*; but it is sufficient that there exist a means which may represent to our mind effects and their causes, their relations and essences, in which means the mind may see all those things. This means we have in ideas, and the force of reading them lies in our intellect. The principle of Vico would only render possible one science—that is, mathematics, which is the creation of man; and upon this principle the German pantheists have constructed their system, as we shall see in its proper place.

ARTICLE SECOND.

Of Science in Relation to Opinion and Faith.

Q. How is science distinguished from opinion and faith?

A. As to opinion, science is distinguishable from it in four ways: 1. In *knowledge*, which in science most firmly clings to the object known without the least

fear of the opposite, whereas opinion implies an adhesion of the mind with fear of the opposite.

2. As to the *matter*; this in science being always necessary and immutable, whereas in opinion it is oftentimes mutable and contingent.

3. For the *means*, which in science is the demonstrative syllogism, deducing certain and evident knowledge from its causes, whilst in opinion the means is the probable syllogism.

4. For the manner according to which they are produced, science being produced by one efficacious demonstration, whilst opinion is engendered by the aid of various syllogisms in consequence of their weakness.

As to faith, science can be distinguished from it for two reasons: 1. The certainty of science consists in two things—in the intrinsic evidence of the object and in the firmness of adhesion of the mind. On the contrary, faith consists only in the firmness of the adhesion of the mind, not caused by the internal evidence of the object as perceived by the mind, but by the external evidence only if we speak of human faith, and by other causes if we speak of divine faith, the clinging of the mind which the latter implies being caused also by an internal operation of God upon the soul.

2. In science we adhere to the conclusion *forced* by the necessity of the principles. In faith we cling to the object prompted by the will, which presents that belief as good.

CHAPTER V.

OF SCIENCE IN ITS MORE ENLARGED SIGNIFICATION INASMUCH AS IT IS A SYSTEM OF TRUTHS.

ARTICLE FIRST.

Idea of Science in this Second Sense.

Q. What do you mean by science in this second sense?

A. Any system of truths belonging to a definite order of things and presented in one body.

Q. Is not science, understood in this latter sense, confounded with art, in which truths and rules are also presented in one body?

A. Art is only an order of rules upon some particular thing, whereas science is always a deduction. In art we do not always find the evidence of principles; in science always. In art the order of rules which it gives cannot, strictly speaking, be called a system; in science the body of truths which it exhibits is always called a system. Three things, therefore, are the property of science in this second sense: principles, deduction, and system.

Q. What about principles?

A. A principle is that from which a thing proceeds; and because we here speak of knowledge, the principle is that by which a thing is known. But we do not know by means of another principle, except that which cannot be known by itself; therefore we must call principles those propositions known of themselves, and which are the cause of the knowledge of

many others—for instance, *Every effect supposes a cause; Those things which are equal to a third are equal to one another. Nothing can be and not be at the same time*; from which it appears that there are three properties of a principle—evidence, necessity, and universality. Evidence is that property by which a thing, in being presented to our mind, makes itself known most clearly. It is of two kinds, mediate and immediate. It is called immediate when the thing can be known by itself without the need of any other, as the principles above mentioned. It is called mediate when the truth cannot be known by itself, but stands in need of other truths to be known. The evidence of principles must be immediate, because it must be the cause of the knowledge of other truths. From this property of *evidence* flows the other, of *necessity*. Because if the thing is evident by itself the mind cannot refuse its adhesion to it, but must necessarily give it. This is called the necessity of a principle. Finally, universality, the third property of a principle, is a consequence flowing from the very nature of a principle. A principle is that which is the cause of the knowledge of many other truths. Now, this must be understood, inasmuch as these truths are contained in that principle. Now, this property of being able to extend to many truths, and in all cases, is called the universality of a principle; therefore a principle must be universal.

Q. Can there be one principle for all sciences?

A. This is impossible, because, 1, the principles of sciences must correspond with the real and objective principles of things. But the species of things which are the object of our knowledge are many and various; therefore many and various must be the principles of sciences: 2. A principle is a law—that is, ex-

presses a certain respect according to which things comprehended in it are regulated. But things are many and various, and various are the respects under which they may be regarded; therefore various must be the principles of sciences. It is true that there exists one principle which is the foundation of certainty, the principle of contradiction, but this can never be such as to enable us to derive from its first cause the science of an object. This principle does not regard any matter of science.

Q. How are principles divided?

A. Into proper and common. Common principles are those which are used in all sciences; as, *Nothing is done without a sufficient reason; It is impossible that a thing be and not be at the same time, of the same kind.* Proper and other principles are those which regard the special matter of a particular science; as, *Do as you would be done by,* which is a principle of the moral science.

Into analytic and synthetic. The first are those in which the predicate is found in the idea of the subject; as, *The whole is greater than any of its parts.* The second are those in which the predicate is not included in that of the subject, but is attached to it in force of our experience; as, *Every body tends towards its centre.* In other words, the one originates in the nature of the subject, the other does not.

The opposite of the analytic principles is absolute, repugnant, and contradictory, and not even God himself could effect it; but the opposite of synthetic principles is contradictory only hypothetically, that is, supposing that the laws according to which bodies are governed be maintained constant. For instance, it is an absolute contradiction to say that a thing is and is not at the same time, and God himself could not effect

such a thing; but it is not contradictory in itself to say that a body, instead of tending towards its centre, should tend upwards, because this may be done by suspending the law of gravitation, which is not essential to the nature of the body. It is only contradictory in the hypothesis that the laws now governing bodies be constant; hence, admitting the law of gravitation actually in force in a given body, it is a contradiction to say that it could tend upwards.

Q. What is the means of science?

A. The other thing most necessary to science is reasoning. Some philosophers, as the school of Locke and Condillac, pretend that the only means of science is induction. But such a theory is absurd. Induction, of itself, does nothing more than generalize a fact, but says nothing of the reason why such a fact is so and not otherwise, and why it takes place, nor discovers the connection between cause and effect. Now, all this is necessary to science; therefore induction alone cannot suffice for science. Therefore we must hold that the primary and essential means of science is the apodictic reasoning. And as science, inasmuch as it is a system, cannot prove everything apodictically, so all other kinds of argumentations are most useful, even those which produce nothing more than probable knowledge.

Q. What is the last thing necessary to science?

A. The connection, or order. For science must equal its subject; and as then only we have truth when the form of the intellect is equal with the thing, so science is true and perfect only when it is a true image of its object. But the object is in itself perfectly well arranged and set in order; therefore science also must be well arranged in its cognitions. Here we may recall the observation of Vico, that in

knowing an object we should divide it in its parts and construct it gradually in our minds, as if we were making it. Nay, this is just what gives to a treatise the character of science—the order and connection of the deductions.

ARTICLE THIRD.

Distinction and Order of Sciences.

Q. What is there to be observed about the unity and distinction of sciences?

A. The true and principal criterion of the unity of sciences is their object. Science, in this second sense, is a system of knowledge belonging to a certain order of things; therefore, if that order of things be one, the science will be one, and hence the unity of each science depends upon the unity of its object. But we must draw a distinction here. The object of the science may be considered materially and formally. We consider it materially when we look at everything and every element which constitutes its being; we consider it formally when we look only at that respect according to which it is the object of a given science. Now, the unity of a science is constituted by its formal object, but not by its material; hence it may happen that many things materially different from each other may form one object of a science, being regarded under one peculiar aspect. For instance, how many are the material objects of physics? Numberless; yet they form one object of that science, inasmuch as they are regarded under the one aspect as phenomena of bodies. On the contrary, it may happen that an object materially one may form the object of many sciences, in each of them being considered under a peculiar aspect. Man, for instance, one material ob-

ject, may be the object of anatomy, physiology, pathology, psychology, and so forth. The formal object, therefore, is that which gives unity to a science.

As to distinction, we say that unity is the foundation of distinction, because a thing is distinct from others because it is in itself one. But unity is given to science by its formal object; therefore from the formal object arises the distinction of sciences. Hence a science is different from others, according as its formal object is more or less different; as, for instance, theology is distinct from cosmology, because their formal objects are different; natural theology is distinct from revealed theology, because their formal object is different.

Omitting all other distinctions of sciences, we shall say a word of that well-known distinction into *speculative* and *practical*. A speculative science is that which regards its object only as truth; practical, that which regards its object as to be acted on; or, in other words, speculative sciences are those which have for their object the contemplation of truth; practical, those which have for their end action.

Q. What is the order and dependence of sciences?

A. Though sciences be different, yet they must be set in order and be dependent. When many things are destined to one end it is necessary that one of them should govern and regulate the others. But all sciences and arts are destined to one end—the perfection of man; therefore it is necessary that one of them should govern and regulate all others and take the name of wisdom. But one may ask, What is that science which may rule and govern all others? That which has certainly the aptitude to govern and rule others. But, as Aristotle remarks, among men those are naturally able to govern who have more intellectual power; and those who are more robust in body but

wanting in talent are naturally liable to be governed. Hence that science must be the first and govern all others which is most intellectual. But that which is most intellectual is occupied about those objects which are most intelligible. The intelligible is the universal; therefore that science is first which has a more universal object. But philosophy has an object more universal than other science; therefore philosophy is that first science on which all depend. And here we conclude this first part of philosophy with that from which we started, after having given a brief idea of the matter, the form, and the end of reasoning.

ONTOLOGY.

ONTOLOGY.

INTRODUCTION—OBJECT OF METAPHYSICS—DEFINITION OF ONTOLOGY.

Q. Give the object of metaphysics.

A. In Logic we have spoken of *being* inasmuch as it is the product of the mind, and have explained the nature of reasoning. This was obliged to be done before all things else, not because of the dignity of the object, but by necessity of method, as we have shown in the Introduction to Philosophy. We proceed now to speak of *real being*, which forms the object of metaphysics. This word, composed of two Greek words, means that which follows physics, and was given by the compilers of Aristotle's works to those thirteen books in which they found the philosopher treated of real being, the name happily chiming with the object of these books, since metaphysics treats of things separated from matter either by abstraction of the mind, as *being in common*, or by their nature, as the soul and God, and if it treat at all of material things it does so in a more noble way than physics.

Q. Give the division of metaphysics.

A. It has been divided into four parts—Ontology, Anthropology, Cosmology, and Natural Theology.

Q. What is Ontology, and what are its parts?

A. Ontology is that part which treats of real being,

considered in common and in a general way. But about real being, considered in a general way, our mind may naturally enquire the following things: 1. What is the nature of real being, considered in a general way? 2. What are its properties? 3. What are its principles and causes? 4. How is it divided? Therefore, according to this natural order, we shall treat of these four things: of the nature of real being in general, of its properties, of its causes, and of its divisions. Beginning from the first, we shall treat of it in the following chapters: 1. Of being considered in itself and in a most general way; 2. Of the first determinations of being—that is, of essence and existence; and 3. Of the manner in which these two last concur in forming real being.

CHAPTER I.

OF BEING, CONSIDERED IN ITSELF AND IN A MOST
GENERAL WAY.

ARTICLE FIRST.

Of the Idea of Being in Itself.

Q. Can you give a definition of being?

A. We cannot, because a definition must be composed of the proximate genus and of the specific difference of the thing defined. Now, being can have neither; therefore it is incapable of being defined. The minor is proved thus: Every genus must have specific differences, which are not comprehended in the essence and idea of the genus, but lie outside of it. For instance, the genus animal has two specific differences, *reasonable* and *brute*. These are outside the essence and idea of the genus. Now, there can be nothing which is not comprehended in the idea of being; therefore being cannot be defined. It may be declared by saying that being is everything which *is* in any way whatever, or that which can be positively conceived.

Q. What consequences do you draw from this doctrine?

A. 1. *That being is the most general and simple idea.* The most general, because nothing can be more intimate and essential to all things than that of being something. Now, this is just what is meant by being. Therefore this idea is applicable to all things, and hence most general. Again, being agrees with, and is

attributed not only to, all things but also to all conceptions and ideas; therefore it is the most general of all ideas.

It is the most *simple*—that is, it has a less number of elements and a more restricted comprehension than all other ideas, because, as we have said in Logic, the comprehension of an idea is in the inverse ratio of its extension. Consequently, this idea, being the most general, is the least comprehensive, and hence most simple.

2. *Being is the first idea, both in the chronological and logical order.* This idea is first in the chronological order, inasmuch as it is acquired by our minds before any other idea. For our mind is so constructed that it must travel in its investigations from that which is less perfect to that which is more so, and hence from that which is more general and confused to that which is less general and more distinct. But no idea is more general than that of being; therefore it is the first which is acquired by the mind. Hence the first thing we perceive in all things is that they *are*, that they are something, and, gradually proceeding forward in the knowledge of them, we come to know them more perfectly and more minutely.

This idea is also first in the logical order, by which we understand that all other ideas are subject, and can be reduced to the idea of being. In fact, everything can be resolved into its primitive and more simple elements. But the idea of being is common to all ideas, and is the most simple of them all; therefore they all can be reduced to that idea.

~ Again, all other ideas are determinations of the idea of being; therefore they can be reduced to that idea. Take, for instance, the idea of Shakspeare. This is an individual idea of the greatest of our English poets,

the most individual expression of somebody. But let us resolve that into its more general elements, and ask, What is the greatest of English poets? *A man*—something more general yet. But what is a man? A twofold substance, spiritual and material, united together by one personality—more general still. But what is a substance? It is a *being* that stands by itself. Here we have reduced the idea of Shakspeare to the idea of being by stripping it of its determinations; therefore the idea of being is the first in the logical order.

Being is the best known of all ideas, because we become acquainted with things unknown by means of that which we know. But we have the idea of being by itself, and by its means we are introduced to the knowledge of all other things; therefore being is the best known of all ideas.

The idea of being, therefore, does not include in itself any determination of substance or accident, of essence or existence, of reality or possibility; because with none of these conceptions can we reconcile the characters and properties which become the idea of being.

Q. What is the idea of *not being*?

A. The negation of the idea of being—that is, *nothing*. But nothing has not an idea of its own, since everything is known inasmuch as it *is*, and nothing is the negation of being; therefore *nothing* cannot be known by itself or possess an idea of its own, but must be conceived through the idea of being.

ARTICLE SECOND.

Of the Univocal Attribution of Being and of the Principle of Contradiction.

Q. In how many ways can a nature or property be predicated of various subjects?

A. In two ways, *univocally* and *equivocally*. The first is when that nature or property is attributed to, and found in, the subject in the same degree and under the same signification. The second is when that nature or property is attributed to many, not because found in them in the same degree, but in consequence of a certain resemblance and proportion between the subjects. For instance, we attribute the nature of *reasonable* to all the subjects called men, in the same degree and under the same signification; therefore we attribute it univocally. But we attribute the quality of *healthy* to the animal body, to food, to air, to place, not in the same sense and degree, but on account of the resemblance between the objects called healthy; we attribute it, therefore, equivocally.

Q. To what can the idea of being be attributed univocally?

A. Only to itself, as when we say, *Being is*; then being is attributed to itself in the same identical signification. From this manner of attribution proceed various analytical judgments, as that which we call of *identity*, and which is expressed thus: *That which is, is; that which is not, is not*. The judgment called of *excluded means*—as, *Something either is or is not*; or as that spoken of—*Being is*. But on close consideration all these judgments may be reduced to one, which is the foundation of all judgments, and which is called the principle of contradiction, which is expressed thus: *A thing cannot be and not be at the same time*.

Q. Is this principle important in science ?

A. It is most important, as that which comprehends all the judgments which arise from the univocal attribution of being.

Q. What are its properties ?

A. 1. *It is known by itself.*

Principles called self-evident, or known by themselves, are those in which the predicate is contained in the idea of the subject ; so much so that the moment we know the terms, that very moment we perceive the truth of the judgment. Take the principle, for instance, The whole is greater than any of its parts. All we have to do to perceive the truth of this judgment is to understand the terms, in which we find that any part of a whole is contained in it as one of its elements, and that, therefore, the whole is greater than any of its parts, as a total is greater than the units composing it. Now, in no other principle is this quality of self-evidence found better than in that of contradiction, because in it the predicate enters as identical with the subject, since the terms of such principle are, Being is being, not being is not being ; therefore the principle of contradiction is self-evident.

2. *It is the most universal judgment and principle.*

The narrowing of a judgment arises from two causes : from the subjects to which they extend, and from the matter of which they treat. For instance, the following judgment, *Man is a reasonable animal*, is narrowed down by the subject, because it extends to man only, and even as to him it applies neither to his will, his liberty, his body, his soul in general, but only to his specific difference of being reasonable. And because the matter of which a judgment treats is represented by the predicate, as may be seen in the above judgment, and in any other like it, we may say that a

judgment is restricted and determined by the predicate and the subject. Hence the greater or lesser universality of a judgment depends exclusively on the terms composing it. Now, among all judgments, there is none which has such universal terms as the principle of contradiction, because its terms are being and not being. Therefore it is the most universal principle, and there can be no judgment not contained therein.

3. *It is the first and supreme principle.*

A principle, to be such, must have two qualities: 1. It must be self-evident. 2. To it we must be able to reduce all other principles. But we have shown that the principle of contradiction is self-evident. We can show also that we can reduce all other principles to it, because principles and judgment are reducible to another when they can be resolved into another, more general, in which they are contained. For instance, the principle, *The head is smaller than the body*, is true, because it can be reduced to that other more general principle, *The part is smaller than the whole*. But the principle of contradiction is the most common and universal principle; therefore to it can be reduced all other principles; therefore it holds the primacy over all other principles. This is so true that no other principle can be produced which may claim the precedence over the principle of contradiction. Attempts have been made by several philosophers to bring forward a principle which could pretend to this precedence, but they have all failed. Des Cartes produced his pet theory: I think, therefore I am; but this principle is true, because founded on that of contradiction. A thing cannot be and not be at the same time, because if the latter were not true how could one say, I think, therefore I am? since in that case it would not be con-

tradiçtory that one should think and not exist at the same time. Leibnitz proclaimed his principle of sufficient reason, *Nothing can exist without a sufficient reason*, and pretended partial primacy for it; but all in vain, since, if the principle of contradiction were not true, it would be possible for a thing to exist and have no sufficient reason to account for it. Consequently, Leibnitz was wrong in saying that the principle of contradiction was first among necessary truths, and the principle of sufficient reason was first among contingent truths, since all truths depend upon the principle of contradiction, and it holds precedence of them all.

ARTICLE THIRD.

Of the Analogical Attribution of Being.

Q. Of what is being predicated analogically?

A. We have said that being is predicated univocally only of itself; therefore it is attributed analogically to all other subjects. These may be God and the creature, and the latter may be a substance or an accident; therefore being is predicated analogically of God, of creatures, of substances, and of accidents. This may be briefly demonstrated as follows:

1. We can attribute something univocally to a number of subjects when they agree in the same species, or at least in the same genus. When they do not agree even as to genus, then we attribute the same thing to them only in consequence of a certain common aspect or relation. Now, being cannot be genus, as we have shown in the first article; therefore we cannot predicate being of God and creatures, of substances and accidents, univocally, but equivocally in force of a certain common aspect we discover between

them. Therefore God and the creature agree in the common attribution, being, but only by a certain analogy between them, and not because they belong to the same species or genus or have the same being.

2. Univocals have this special property of their own: that they are found, according to their common aspect, in the same manner in all those subjects to which they are attributed, as man, which is predicated of many individuals, and is found in all of them in the same manner. On the contrary, in analogous things the common feature is found in a different way in the subjects, as the attribute *sound*, which may be predicated of food, of the animal body, of the mind, etc., and which is not found in the same manner in these several subjects. But being is not found in the same manner in God and in the creature, in the substance and in the accident; therefore it can only be attributed to them analogically.

3. Univocals are restricted by the difference which lies outside the common nature, whereas analogicals are determined always by the different manner in which they enjoy that common aspect which makes them analogicals. For instance, *animal* is not determined and narrowed down by the different manner in which it is found in man and in the brute, because it is the same in both; but by the difference of reasonable or unreasonable, which lies outside the essence of the animal. Now, being cannot be narrowed down by any difference lying outside the nature of being—because what is there which is not being?—but it is narrowed down by the different manner of being. Therefore being is predicated analogically of those different subjects. That being is found differently in God and in the creature, in the substance and the accident, as we have supposed in the minor of all the preceding

arguments, is evident; because God is the essential, most pure, infinite, independent being, the fulness of all perfections of being; whereas creatures are not essential or necessary beings, nor have they the fulness of being, but have a borrowed, finite, dependent being.

Substances are independent of accidents as to their existence; accidents cannot exist without the substance. The latter possesses being directly and in itself; the accident only indirectly and by means of the substance. The being of the substance is strictly such, but the accident is only an adjunct, an appendage to the being of the substance. Therefore it is evident that being is found in a different manner in God and in the creature, in the substance and the accident, and that, therefore, we can predicate being of all these subjects only analogically.

CHAPTER II.

OF THE DETERMINATIONS OF BEING IN GENERAL— ESSENCE AND EXISTENCE.

ARTICLE FIRST.

How are Determinations of Being to be Understood?

Q. How is the idea of being determined and narrowed down?

A. Being, as we have described it in the first chapter, indeterminate and common, does not exist in nature. To represent, therefore, a *real* being, that idea, in force of its vagueness and indetermination, is not sufficient, but must be made more definite and contracted. But how is this to be done? How can *being* be made definite? All other ideas can be made more definite by adding something distinct and different from them; as, for instance, the idea of animal is made more definite by adding to it the element of reasonable. But this cannot be done with the idea of being, because what can we add to it which is not being? To limit, therefore, the idea of being must be done by the same idea of being a little more explicit; because ideas must correspond to objects, but objects are so many special beings; therefore their ideas can be nothing more than so many explicit conceptions of being.

Q. What are the first limitations of being?

A. Two: *essence* and *existence*. But to understand these two limitations it is necessary to speak first of *possibility*. The idea of possibility has been

variously misrepresented by philosophers. A possible is that which is capable of being. This aptitude may be of two kinds: intrinsic and extrinsic. A being is called intrinsically possible when the elements which must constitute it do not clash with each other; because possibility has relation to being, hence all that which may be is possible. But to prevent a thing from being can be effected only by the principle of contradiction; therefore all that which does not involve an interior repugnance is possible. Now, the mere intrinsic possibility or agreement of the elements which have to constitute the being would not of itself be sufficient for a being really to exist. Another condition is required, because everything which may be cannot come from the mere possibility to the actual act of being, except by means of a being already in act which may carry that aptitude into reality. To be able to exist by means of this external agent carrying that internal aptitude into the actual fact of being is called *extrinsic possibility*. And because these extrinsic agents or causes may be either God or creatures, extrinsic possibility is divided, according to St. Thomas, into possibility according to the supreme cause—God—and into possibility according to the proximate causes, meaning creatures.

Everything which is contrary to possibility is called impossible, which may also be of two kinds, intrinsic and extrinsic impossibility. The first occurs when the terms or elements of a thing are contradictory, as a square circle, a four-angle triangle, a material spirit. The second is found when there is no external cause to carry the intrinsically possible into reality. From these definitions we may gather that all that which is intrinsically impossible is also externally so, and can never be effected, even by God himself.

Q. Give the different misrepresentations of this idea by philosophers.

A. Hobbes, Spinoza, Robinet, doing away with all idea of the possible, have said that thing only is possible which really exists. This is absurd. Possible is that which may be. Now, if we look at the idea of being in itself, we find that it can extend not only to things really existing, but also to many more. On the other hand, if we regard the causes which may reduce possibilities to act, we find that they could effect a great deal more than they actually do. We know by the testimony of internal consciousness that we could do a great many more things than we do. God could certainly create many more things than he has created, else his power were limited; therefore the idea of such philosophers is false.

Others have said that the omnipotence of God is the index and the test of the intrinsic possible, that alone being possible which can be effected by that perfection. Now, in the first place, these philosophers turn around in a circle, for if we ask them what is that which God's omnipotence can do, they will answer, That which is intrinsically possible; and if we beg of them to tell us what is intrinsically possible, they will subjoin, That which God's power can do.

Finally, others, like Descartes, have said that the intrinsic possibility of things depends upon the will of God. If God wills a thing, well and good; it is intrinsically possible. If he do not will it, it is impossible. Now, according to this opinion, it would follow that if God pleased to make the circle square he could do so, or that a triangle should have four angles, which is absurd, because that which involves a contradiction is nonentity, a mere nothing. Consequently, in the supposition of God's effecting that which is intrinsically

impossible, we would have the infinite power of God exercising itself about, and resulting in, a nullity worse than *Parturient montes, nascetur ridiculus mus.*

ARTICLE SECOND.

Definition of Essence.

Q. What is essence ?

A. The idea of essence, in consequence of its simplicity, is developed in various ways, and, according to these different ways, it takes different names. Gathering these different ways under certain heads, we may say that essence may be considered under a threefold aspect: 1, in itself; 2, relatively to its effects; 3, respectively to its conception in our minds. Considered in itself, it may be defined: *That which causes a thing to be what it is and distinguishes it from all others.* Under this aspect it is strictly and properly called essence.

Considered in its effects, it is defined: *That first radical and intimate principle of all actions and properties which may belong to a being.* In this regard it is called nature.

Finally, considering it relatively to our way of apprehending it, it may be defined: *That which is first conceived as the first thing in a being, or that which is expressed by the definition.* Under this relation it is called *conception, or reason.*

From these definitions we draw the following corollaries:

1. Essence in the first sense—that is, in itself—can only be attributed to substances, because the essence is that which causes a being to be what it is and to be distinguished from all others; therefore it can be attributed to that only which strictly and

perfectly exists. But this can be said only of substances, because accidents are imperfect beings or the mere complement of a being. Therefore essences, strictly and properly speaking, can be attributed only to substances. We say this not as meaning that accidents have no essence, but as implying that it can be attributed to accidents only imperfectly in the same sense as being is predicated of them.

2. Essences dwell intimately in things, because they are the principle and origin of the properties and actions of things. Hence Plato was wrong in admitting essences separated from things and existing in themselves, and which were the cause of the being and knowledge of things, because things are what they are in force of their essence, and become known by means of the essence. Therefore, if essences were separated from objects, they would no longer be what they are, and would not become known.

3. It follows that the essence is that by means of which things are truly and properly known, and the first thing we conceive about an object when we come to think about it. Hence the opinion of Locke and Gioberti is false which asserts that the essences of things are unknowable, and that our mind knows only certain essences which it forms itself. Such an opinion is absurd, first, because our knowledge can only be called true knowledge when it corresponds to the reality of things. But that by which things are what they are is the essence; therefore we have a knowledge of things only when we know their essences. Consequently, if essence were unknowable, we could never have a true knowledge of things, and would fall into scepticism.

2. Sciences would become impossible, inasmuch as they are founded upon the essence of things.

3. It is a fact that we know the real essences of many things, inasmuch as we perceive in them certain differences which cause them to be what they are and enable us to distinguish them from others, and which differences we perceive as the source of all the properties of such things. For instance, we can distinguish plants from brutes, brutes from men, men from pure spirits; and we see something in all these as the principle and source of their properties. Now, if this is not knowing the real essence of these things, what is?

4. Finally, we cannot see why the essences of things should be unknowable and unthinkable. Everything is knowable inasmuch as it is and in the way it is. But the essence is that by which a thing is what it is; therefore everything is knowable by its essence, and it cannot be impossible that essences should be known and be the object of our thought.

Q. How are essences distinguished?

A. Essences cause beings to be what they are; therefore they must be different, according to the difference of beings. Now, beings are first classified as substances and accidents; therefore there must be essences of substances and essences of accidents. The first are found perfectly in the beings of which they are the essence; the second only imperfectly. The essences of substances, then, are divided into essences of material substances and essences of simple and immaterial substances. The first are composed of matter and form, and cannot be without matter. The others are forms only, without matter, and consequently are more perfect than the first.*

* St. Thomas, *De Enta et Essentia*.

ARTICLE THIRD.

Remarks on Essences.

Q. What remarks have you to make on essences ?

A. The first is about the *indivisibility of essences*. From our having distinguished essences of simple substances, one must not infer that such essences are simple, having one single property ; nor from our having distinguished essences of compound substances has any one a right to conclude that such essences may be divided into parts like their substances. With the exclusion of the divine essence, all other essences are formed of more than one property, but they are all indivisible in spite of that. Essences locate objects in their proper species and genus, cause them to be what they are and to be distinguished from all others. Hence it happens that definitions which express essences must be composed of the proximate genus and the specific difference, because the essences of creatures must have something which agrees with other creatures, and something which may distinguish them from others. Consequently, they must have at least a twofold property, that of the proximate genus and that of the specific difference. But, nevertheless, they are indivisible, as Aristotle says, like the species of numbers, to which if we add or subtract a unit their species is changed. Likewise with essences: if we add to them one property or take away one property, they are no longer the same essences. For instance, if we add to the genus animal the species reasonable we have man ; or if we take reasonable we have the brute. Essences, therefore, are composed of more than one property, but are indivisible in the sense that we can neither add to nor subtract from them any property necessary to make such essences.

The second remark is that to all essences may be attributed the three following qualities: *immutability*, *necessity*, and *eternity*. But as this may be misunderstood, it is necessary to explain in what sense an essence is immutable, necessary, and eternal. Essences cannot be said to be immutable, necessary, and eternal in the sense that they have a position and actual existence in themselves. Before they actually existed in themselves they did not exist at all; they were created in time, and might, absolutely speaking, be destroyed. Hence in this sense they are mutable, contingent, and temporary. But they are said to be immutable, necessary, and eternal in two ways: 1. As to the elements of which they are composed. These, as we have said, are indivisible, inasmuch as we can neither add to nor subtract from them, otherwise they would not form the same essence. In this sense they cannot change. Now, what is unchangeable is necessary and eternal; therefore essences, with regard to the elements of which they are composed, are immutable, necessary, and eternal. For instance, a triangle is composed of three angles and three sides; and hence at no time will it ever be possible that it could have four angles and four sides and remain a triangle.

2. Essences are immutable, necessary, eternal inasmuch as they are found positively in God's essence and intellect, because we know that in God are to be found the archetypes of all things. Essences, therefore, inasmuch as they exist in the divine intellect, in which are the archetypes of all things, are immutable, necessary, and eternal.

But from the fact that essences, as to the elements from which they result, and inasmuch as they are seen by the divine intellect in God's essence, are immutable, necessary, and eternal, we cannot infer that they

do or must actually exist in themselves outside the essence of God. But the only inference we can draw is that if they ever exist in themselves—a thing depending on the free-will of God—they must necessarily be composed of such elements.

The last remark regards essences in relation to their properties and action.

And, first, as to properties. These being so bound up with the essence, it follows that by adding or subtracting one of them the essence vanishes; and, *vice versâ*, excluding the essence, the properties also vanish. This, of course, must be understood of essential properties.

With regard to the action, we remark that, the essence being the most intimate and first principle of action in a thing, these actions must be agreeable in nature to the essence, because *every being acts as it is*. If it were otherwise, the being would and would not be such a being, which is a contradiction.

ARTICLE FOURTH.

On Existence.

Q. What is existence?

A. The idea of existence is so simple that it can hardly be defined. We shall treat of it as follows: We have said that in God exist the archetypes of all essences—that is to say, the idea of the elements of which the essences of things must be composed; and we have remarked also that as such they have no real existence in themselves. But suppose God determines to realize those ideas, and does so in fact; in that case the essences are actualized. This gives the idea of existence, which may be defined that by which an essence is brought out of nothing, or the realization or actuality of an essence in itself.

CHAPTER III.

*OF THE MANNER IN WHICH ESSENCE AND EXISTENCE
CO-OPERATE TO FORM A REAL BEING.*

Q. How do essence and existence co-operate to form a real being?

A. To have *real being* essence and existence are necessary. This is proved as follows: First the essence is necessary. The essence is that by which a thing is what it is and is distinguished from all others; the radical, internal principle of all the properties and actions of the thing—that which is manifested by the idea of the thing. But all real being is something in itself, by which something it is distinct from all others; it has properties and actions, and, consequently, an internal principle from which its actions proceed, and is necessarily possessed of a conception peculiar to itself. Therefore in all real being the essence is necessary.

Existence is also necessary. Existence is the act of the essence, or that by which the essence is put beyond the sphere of possibility by having undergone the action of the cause. But all essences of real being must be actual and not potential; they must have passed from under the action of the cause, because when a thing is under the action of the cause it is on the way to existence, but does not as yet exist, and, when it is in nothingness, is not real. Therefore existence is necessary to real being.

We must remark here that essence and existence are distinct in created beings, but not so in God. In fact, if

in creatures essence were the same thing as existence, creatures would always exist by the necessity of their nature. Because that is indispensable to them which is required by their essence; if, therefore, in the supposition their essence were the same as existence, the latter would be indispensable to them, and hence their existence would be necessary by the necessity of their nature. But such a thing cannot be said of creatures, which do not exist by the necessity of their nature; therefore in creatures essence is distinct from existence.

2. If there were a creature in which essence were not distinct from existence, to it we should naturally attribute all that which belongs to being, as such. But it does not become being, as such, to be an effect, because in that case every being would be an effect, and God also. Therefore, if in creatures existence were not distinct from essence, their being would not be an effect; in other words, they would no longer be creatures.

But if essence and existence were distinct in all beings, all beings would have an existence by accident; all would be potential beings first before being actual; all beings would be produced without our ever being able to find a necessary cause always in act. But this would be a contradiction; therefore we must, on the other hand, admit the necessity of a being in which essence and existence are *not* distinct, and which may be the cause of all the others. This is the uncreated Being. This will be better explained in Theology.

Q. How are essence and existence distinguished?

A. They cannot be distinguished as true parts of a whole, because a part is not the whole. But the essence is not a part of the substance but of the whole—

that is, of the whole substance. Therefore essence and existence cannot be distinct from each as true integral parts, nor concur to form the real being as parts form the whole. Again, the part does not exhibit the idea of the whole. But the essence exhibits the idea of the whole being; therefore essence cannot constitute the real being as an integral part constitutes the whole. They concur, therefore, as act and potentiality, because the act of the essence is existence. We might also say that they concur as two acts, because the essence is the act of being, inasmuch as it makes it be such and no other; existence is the act of being, inasmuch as it draws it out of nothing and determines it to the act.*

* St. Thomas. *Contra G.*, lib. ii. ch. 34.

CHAPTER IV.

OF THE PROPERTIES OF BEING.

ARTICLE FIRST.

On Unity.

Q. How can being have properties, and what can they be?

A. In the first place, the properties of being cannot be something merely ideal or purely negative. Not ideal, because that which is fashioned by the intellect and has only a logical existence cannot be the property of being. Not purely negative, because the idea of property implies always something positive and real. On the other hand, the idea of being is the most common and universal, and comprehends everything in itself. What, consequently, is there positive and real in *being*, distinct from itself, which may answer as its properties?

Nothing. Therefore if a property must be something positive, and if there can be nothing positive which is not included in being, we must conclude that the properties of being cannot be anything else than being itself, inasmuch as it is affected either by some negation or some other extrinsic relation which may really be attributed to it. As to negation, this cannot affect being, except in the sense that we deny of it its being divided, because being, taken universally, does not present this or that distinction; hence we cannot deny of it this or that particular thing, but only that

which is opposed to being, which is next to absolute negation—that is, division, as we shall see.

Division alone, therefore, can be denied of being; and this negation of division constitutes the first property of being, which is *unity*.

With regard to extrinsic relations, there cannot be any others than those referring to the intellect and to the will, because only the relation to the intellect and to the will is common to all beings. But the relation of being to the intellect is called truth, and the relation of being to the will goodness; therefore the properties of being are no more than three—*unity, truth, and goodness*. And they arise from being in this order: first unity, next truth, and, finally, goodness.*

Q. Explain the idea of metaphysical unity.

A. The first property of being, then, is unity. This may be defined: *That property of being by which it is undivided in itself and divided from others.*

This is called metaphysical unity, but to understand it well it is necessary to carefully determine it. First, it must not be confounded with numerical unity—to wit, that unity which is the measure and principle of number. From this arise two, three, four—that is, number; but from metaphysical unity no number can arise, at least directly, but only being. Neither must we confound the property of unity with that quality which makes a thing unique, because the latter property implies that a thing is sole, or that which excludes the existence of an equal thing, whereas the former excludes a division of it-

* This natural mystery of three distinct things in being, and which, though distinct from each other, cannot be anything else than one being, can only be explained by a higher and more sublime mystery, the principal dogma of our faith—the Trinity. We shall develop this view in the internal evidences of Christianity in the second volume of this work.

self. In a word, metaphysical unity adds nothing to being, except the negation of its being divided. But from this, however, we cannot deduce that the idea of unity is a negative one. Also *immense, immortal, immutable* seem to express a negative, yet their idea is positive; likewise unity, which, after all, does not imply anything else, except the same entity* of being, inasmuch as it is not divided. We have added to the definition that which divides it from others, so that this unity implies two elements, that of being undivided in itself and divided from others. The first is necessary and essential to metaphysical unity; the second is a consequence of the first, because a being is distinct from others, for the very reason that it is in itself undivided.

Q. Prove that every being is one.

A. Everything is and is called being inasmuch as it has an entity of its own. But that which has an entity of its own does not contain more than one being, and is, therefore, in itself undivided; and that which has an entity of its own does not share it with others, and is, therefore, distinct and divided from others, all of which things are necessary conditions to establish metaphysical unity; therefore every being is one. 2. Every being has an essence, by which it is restricted to be this and not another. Now, to be restricted to a particular existence means, first, to be confined and restricted under special form, and not to be divided into several entities; besides, if it is restricted to a special existence it is necessarily distinct and divided from all others; therefore every being is one.

3. Finally, a being is either simple or composite—that is, either immaterial or material. If it be simple,

* Word used by Bentley.

it is undivided in itself, both actually and potentially, and not only undivided but indivisible, and this by necessity of nature. If it be composite, then it may be divisible potentially; but actually it is always undivided, because it does not possess its entity when its parts are divided, but only when they are united; therefore every being is itself undivided. Every being, therefore, is one, and unity is convertible with being.

Q. What remarks must be made on the nature of unity?

A. We have said that the idea of metaphysical unity implies two elements, indivision in itself and division from other beings—the first necessary and essential, the second a consequence of the first. Now, we must make some remarks on both. As to the first, it is clearly seen that unity, or indivision in itself, is a perfection of being, and that a being is perfect in proportion to its indivision, and for that reason we say that the idea of unity is positive.

We have said, moreover, that unity is convertible with being; therefore it is different in proportion to the difference of being. Now, beings may be simple or composite; therefore unity may be twofold: the unity of *simplicity*, which consists in a thing not only being undivided actually, but in being altogether indivisible; the unity of *composition*, which agrees with composite beings, and which implies actual indivision and potential division—that is, though actually undivided it may be divided. Again, this composition may be essential or accidental—as, for instance, the union of the body and soul is essential, the union of many soldiers to form an army is accidental; hence two kinds of unity of composition, natural and accidental.

This indivision, whether it belongs to composite or

simple beings, whether it agrees with them naturally or accidentally, inasmuch as it is considered as really corresponding to itself, is called *identity*. Wherefore identity is, strictly speaking, the absolute conformity of a being with itself; and only in a loose sense can we call identity the conformity of one being with another.

As to the other element of unity—that is, distinction from other beings—this may be of different kinds and has several degrees.

Distinction, like indivision, follows the condition of being. Now, one being may be divided from another either really or logically; therefore the distinction of one being from another may be of two kinds, logical and real. It is logical when things are not really distinct from each other, but are so conceived and distinguished by the intellect; for instance, in God his essence and his attributes are not really distinct, but our intellect, the better to know them, considers them separately by a logical distinction. *Real* is when a thing is not really another; as, between cause and effect there passes a real distinction. *Both* are of different kinds: the real is subdivided into substantial, accidental, and modal; the substantial is that which exists between separate substances—for instance, between man and the brute, or between the principles really distinct of a composite substance, as between the soul and body, which are the principles forming man.

Accidental and modal distinction is that which exists between the substance and its modifications, or between one accident and another and its modes.

Logical distinction is subdivided, in a twofold manner, into purely mental or logical and into virtually logical. The former occurs when the mind makes the

distinction without having any foundation in reality, as if one were to distinguish man from reasonable animal. The second is when it is made with some foundation in reality, as when we distinguish in the human soul the rational, the sensitive, and the vegetative principle, because, though the soul is but one principle, it has yet these three faculties and affords some foundation for that distinction.

Distinction may have different degrees, because that which is different from another may be so more or less, according as it is more or less conformable with the other. Now, the limits of conformity or non-conformity determine the degrees of distinction. This gives rise to various notions. 1. Things may be distinct from each other as to the essence, inasmuch as the essence of one is not the essence of the other, and in this case they are called *diverse*, and the distinction *diversity*. 2. Things may agree in the essence or some other common feature, but vary as to the manner in which the essence or the feature common to both is found in each; and in this case those things are called different, and the distinction difference. 3. Or they may agree in the essence and in the determinations of the essence, but vary as to their qualities; and in this case they are called dissimilar, and the distinction *dissimilarity*; and if they agree, *similar*, and the agreement *similarity*. 4. If things agree in essence, determination of the essence, and qualities, but vary in quantity, they are called *unequal*, and the distinction *inequality*; and if they are even in this, *equal*, and the agreement *equality*. 5. Finally, if things are considered as divided only in respect to number, they are called *distinct*, and the division *distinction*.

ARTICLE SECOND.

On the Truth of Being.

Q. Give the idea of metaphysical truth.

A. In Logic we defined truth to be the conformity or the agreement of things with the intellect. Now, things may be regarded as related to the intellect in two ways: either because they are produced by it, or because they are merely the object of its apprehension. For instance, all natural things can be referred to the divine intellect in the first manner, not only inasmuch as they are known by it but also inasmuch as they are created by it. They can be referred to the human intellect only in the second manner, inasmuch as they are known by it. From this arises the distinction of truth into metaphysical and logical. Metaphysical truth consists in the agreement of all natural things with the divine intellect, on which they depend for their existence. Logical truth consists in the agreement of the conceptions of our intellect with the things which those conceptions represent. Here we treat merely of metaphysical truth, to establish which two things are required: the entity of the thing which is the foundation of truth, and its agreement with the type existing in the divine intellect.

Q. What errors were maintained by Wolfius and Locke with regard to the essence of metaphysical truth?

A. Wolfius and his followers held that the formal reason or essence of truth consists only in the entity of a thing. Locke maintained that it lies in the agreement of the real existence of things with the ideas of our intellect. Both these opinions are false. The first is false because, if the entity of a thing alone

established its truth, truth would not imply any relation, but would be altogether the same thing with being, and hence entity and truth would be only two words meaning the identical thing. But this consequence is false by the admission of the Wolfians themselves, who teach that truth is not the thing itself, but a transcendental property of being. Therefore the essence of truth cannot consist in the entity of a thing.

The second opinion is false. The essence of truth cannot be placed in the agreement of things with an intellect to which they are related only accidentally, but with an intellect to which they are necessarily and essentially related. Now, things are related necessarily and essentially only to the divine intellect, and only accidentally to our intellect; therefore the truth of things must be found in their conformity with the divine intellect.

Q. Prove that every being is true.

A. 1. Every being is just what it is. But every being is just what it is because God has thought to make it so; therefore every being is what God has thought it to be, and, therefore, conformable with the divine type.

2. If things did not correspond with the divine archetypes after which God made them, we should conclude that either he knew not or could not create them just as he thought them out. But the first supposition is repugnant to infinite Wisdom; the second, to divine Omnipotence. Therefore all beings must be conformable with the divine archetypes. Hence with reason was it said by the schoolmen that being and truth are convertible terms—that is, that every truth is being because the truth of things is founded upon the entity of a thing, and every being is true be-

cause every being necessarily implies a relation with the divine intellect.

Q. What remarks must be made on the nature of truth?

A. From what we have said it is clear that the nature of metaphysical truth is such that it absolutely excludes the contrary; hence it would be absurd to say that there can be metaphysical falsehood, and if we call anything false we do so only in a logical sense—that is, it is true in itself, but we may misapprehend it.

It is clear, in the second place, that truth is necessary and universal, because all beings must necessarily be related to their types which are in the divine intellect; whereas logical truth is accidental, because things are not necessarily and by their nature related to our intellect, but, on the contrary, the latter is related to them. Finally, it is clear also that in metaphysical truth the intellect is the measure of things, because things have in themselves just what the intellect has idealized and proposed to create; on the contrary, in logical truth things are the measure of the intellect, because the latter can know just what things represent. Hence in metaphysical truth first comes the operation of the intellect and next the thing; in logical truth first the thing and then the operation of the intellect.

Q. Is truth one or manifold?

A. We must answer by making a distinction. If we speak of logical truth, then it is not one but many; because logical truth is the agreement of the conception of the intellect with the things which those conceptions represent; therefore there can be as many logical truths as there are things of which faithful conceptions may be formed by the intellect.

If we speak of metaphysical truth, then we must distinguish again. If we look at truth in its formal reason or essence, that which really makes it truth, then it is only one; because that which makes all beings true is their conformity with the divine intellect. Now, this relation with the divine intellect is only one and the same in all things; therefore in this sense metaphysical truth is one. If we look at truth in its fundamental aspect—that is, at the entity of things—as there are various entities, so we may say that there are various truths. But it must be understood that truth in the latter sense is only taken improperly and analogically, and not in its true and proper sense.

Q. Is truth necessary, immutable, and eternal?

A. We must again distinguish. If we speak of metaphysical truth, it is so, because this truth is, properly speaking, in the divine intellect. But everything which is found in the divine intellect is necessary, immutable, and eternal; therefore truth is necessary, immutable, and eternal. But if we speak of logical truth, then we must again distinguish. If it is question of the truth of first principles and their most immediate consequences, this is certainly necessary, immutable, and eternal, because no one can be deceived or change his opinion about them. But their necessity, immutability, and eternity is like that of essences, of which we have spoken. If we speak of those truths which are discovered by reasoning, and are deduced immediately from first principles, then the conformity of our intellect with them may change, not because what has been once conformable with things may change in itself, but because our intellect may dismiss it and turn to error. Hence in the sense explained we may say with Shakspeare:

“Truth is truth to the end of reckoning” ;*

or with Bryant :

“Truth crushed to earth shall rise again :
The eternal years of God are hers.” †

ARTICLE THIRD.

Of the Goodness of Being.

Q. Give an idea of the goodness of being.

A. Some have said that, formally speaking, goodness is the same as being. But if such were the case, goodness would add nothing to being, and the idea of both would be the same. Now, this is false, because either in speaking or thinking we distinguish these two ideas from each other. Others have held that the formal conception of goodness is the same as that of perfection. This is also false, because we think a being perfect by considering it alone by itself, and inasmuch as it does not fail to have all those things requisite for its essence, virtue, and operation, the very things in which perfection consists. On the contrary, goodness always implies a relation to a tendency of which it forms the proper object, because that which a tendency yearns after is goodness. We are obliged, therefore, to conclude that goodness, formally and essentially considered, lies in its being sought after by a tendency or appetitive faculty, and it may therefore be defined : *That property for which a thing is sought after.*

Q. How many kinds of goodness are there ?

A. Three kinds, metaphysical, physical, and moral. The first consists in this, that a being is sought as being in general ; the second, inasmuch as it is such a

* “Measure for Measure.”

† Bryant’s poems.

being in particular; the third, inasmuch as it is agreeable with moral laws. We shall speak here only of metaphysical goodness.

Q. Prove that every being is good.

A. That this metaphysical goodness is the common and necessary property of every being is proved thus: The formal reason of the goodness of a being lies in the fact that it may be sought after by an appetitive tendency. But every being may be sought after by an appetitive tendency; therefore every being is good. The major is apparent from the definition of goodness we have already given. The minor is proved as follows: A thing is appetible inasmuch as it is perfect, because every being seeks and desires only its own perfection. But every being, as being, is perfect, because every being, as such, is in act, and a thing is called perfect inasmuch as it is in act. Therefore every being is appetible.

Q. What remarks have you to make on the nature of goodness?

A. 1. It is clear from the reason just given that, though goodness in its formal idea is distinct from perfection and entity, it has yet a strict alliance with both; because every being is good inasmuch as it is perfect, and is perfect inasmuch as it is being, so that being is the foundation of the perfect, and the perfect the ground-work of the good; hence in order being comes first, next the perfect, and last the good. For this reason it is said that goodness is convertible with being.

“One truth is clear: whatever is, is right.”

—POPE.

2. As being may be either essential or accidental, so metaphysical goodness may be either essential or

accidental. Essential goodness is that which is becoming to essences; and as essences are incapable of growth or decrease, so neither is essential goodness capable of such change. Accidental goodness is capable of growth or decrease, because accident does not constitute the essence, but is added to the essence already constituted, as to be learned is accidental to goodness, and therefore may be capable of increase or diminution. 3. From this theory of the goodness of being other most important corollaries follow in relation to *evil*.

Evil is the opposite of good, and is defined: *The absence of a perfection required in a being*. For instance, *sight* is required in man's body, and hence its absence is a real evil. But if a perfection is not required by the nature of a being, its absence cannot be called evil; hence if a stone is not endowed with a rational principle, this can never be called an evil.

In this sense Pope has said :

“Then say not man's imperfect, Heaven in fault ;
Say rather man's as perfect as he ought :
His knowledge measured to his state and place,
His time a moment, and a point his space.”

—*Essay on Man.*

From this it follows: 1. *That evil is not in itself an entity*. Every entity is good, because, as we have said, good is convertible with being. Now, evil is the opposite of good; therefore evil is the opposite of entity, or the privation of being. 2. *Evil is founded and exists in good*. If evil has no entity of its own, it follows that it cannot exist in itself; therefore it must exist in some being. But every being is good; therefore evil must exist in good. 3. *Evil supposes a cause, and this cannot be but a good*. Evil is the privation and the absence of a certain perfection which

the nature of being requires and must have. But that a certain being should be deprived of its natural perfection, this must originate in a cause which may draw that being outside its disposition and order; therefore evil supposes a cause. This cause must be good. Because a nonentity cannot be cause, as it cannot act; if evil, therefore, must have cause, this must be an entity. But good and entity are convertible; therefore good is the cause of evil. 4. *Good is the cause of evil only accidentally.* Every effect must have a proportion and likeness with its cause; therefore the proper effect of good cannot be but good. If, therefore, sometimes it produces evil, this cannot be but by accident. 5. *Metaphysical evil, propounded by Leibnitz, is an absurdity.* Metaphysical evil, according to Leibnitz, consists in the limitation of the creature, inasmuch as it cannot have other perfections than those required by its essence and nature. Now, this is not evil, because evil is the absence of a perfection required by the nature of a being. But perfections which are not required by the nature of a being are not due to it; therefore their absence cannot be an evil. Hence metaphysical evil, invented by Leibnitz and his followers, does not exist.

Q. What is the order of the transcendental properties of being?

A. They proceed from being in this manner: first is unity, next truth, and, last, goodness. That unity is the first transcendental property of being is evident because it is absolute, and becomes being by itself and not by any denomination to any exterior thing, as truth, which implies a relation to an intellect; and goodness, which implies a relation to an appetitive faculty. Now, the absolute is before the relative; therefore unity is before truth and goodness. Next

comes truth, because, 1. Truth implies a relation to an intellect, goodness to an appetitive faculty or a will. But the intellect precedes the will; therefore truth is before goodness. 2. Because goodness is, in a certain manner, founded on truth; health, for instance, to be good, must be real, true health, because if it were false it could not be good health. Now, the foundation of a thing precedes the thing itself; therefore truth is before goodness. From this, of course, we must not conclude that the aforesaid properties are really distinguishable from being; their distinction from it being only logical, without a foundation in reality.

ARTICLE FOURTH.

The Beautiful.

Q. Why do you speak here of the beautiful, and what is its definition?

We speak here of the beautiful because it has such close connection with unity, truth, and goodness. Now, before giving the definition of the beautiful we must distinguish three things about it: the formal essence of the beautiful, its foundation, and its effect.

And, first, as to its foundation. The beautiful is founded on goodness, because our soul cannot take pleasure in anything except what it desires and craves for. But our soul cannot crave except what it apprehends as good; therefore our soul cannot take pleasure except in what it apprehends as good. Now, our soul does take pleasure in the beautiful; therefore it must apprehend something good in the beautiful as its foundation.

As to its effect, it is admitted by all philosophers, and confirmed by the common sense of mankind, that

the effect of the beautiful consists in giving pleasure. The simplest child, for instance, in looking at the sky in its most magnificent apparel, in looking at a landscape, cries out, with pleasure beaming from its eyes, Oh! how beautiful, how charming. And what the child does, so do the most consummate artists, as was the case with Michael Angelo in the presence of the Apollo of Belvedere, when he stood, day after day, rapt in pleasure, contemplating that wonderful representation of the human form divine, chiselled with such admirable art and truth, which has not as yet been surpassed; the effect of the beautiful, therefore, is to give pleasure.

As to its essence, the beautiful consists in variety reduced to unity by order and proportion of the parts with each other and with the whole.

Q. Explain the definition.

A. The beautiful consists, 1, in *variety*, because if we were to contemplate unity bare and naked, and nothing but unity, we should soon get tired and wearied and turn away from it in disgust.

2. *In unity*; because if we saw a number of objects without any connection or relation with each other, the same effect would result: we should take no pleasure in contemplating them.

3. *Order* is required, because a number of objects put together without any idea or principle regulating their arrangement would present nothing but confusion, and be not only unable to cause pleasure but render impossible the unity required for the beautiful.

4. *Proportion* is required between the parts and the whole. This proportion means that there should be a kind of softening in the variety of each part, so as to gently make way for the unity of the whole; because if the parts were kept in their decided, crude variety

unity could never be effected. But if, in the extremes of each part, a softening of their variety is produced, so that one part may, by its extreme being softened down, almost touch the extreme of the other part, also softened down, the unity is gently procured without disturbing the variety of the parts. If the extremes of these parts could not be softened down, their nature not permitting it, then between one part and another a third must be placed, of such nature as to answer for the keeping of the proportions required to result in unity. To illustrate this theory about proportion we may make use of the parts of creation, the best representation of the beautiful. God has created spiritual beings and sensitive beings, living and inanimate beings. Had he kept the variety of each of these species in their crude state, so to speak, the harmony and the beauty of creation would have been marred in consequence of the too great contrast between them. But God put an intermediate species between each to soften down the contrast and make way for the unity of the whole. Hence between the purely spiritual species and the sensitive God has placed man, partaking of the spiritual and the sensible softened down in him; between the sensitive beings, such as animals, and the living beings, such as plants, God has placed a kind of animal endowed with one sense, and that very dull, so as to approach the two species together, such as the polypus and all corallines; between the living beings or plants and the inanimate God has placed something which seems to be bordering between the plant and the animal, such as the fungi, under which name botanists comprehend also a large number of microscopic plants forming the appearances called mouldiness, mildew, smut, rust, brand, etc.

Q. How is the beautiful divided?

A. The beautiful is divided into natural, artificial, and moral; and the natural is subdivided into spiritual and corporal.

The beautiful natural is that which is found in every being and in the whole assemblage of created beings forming the universe. That in every being we find a variety reduced to unity by order and proportion is evident; because, first, every nature is composed of different principles, which are so connected together by order and proportion as to make a beautiful whole. Take, for instance, man. He is composed of body and soul: the body consists of motive, vegetative, sensitive faculties; the soul of intellectual and volitive faculties. The motive faculties are subject to the vegetative, then to the sensitive. The variety of the senses is brought into unity by what is called a common sensorium. These are brought into communication with the intellectual faculties by means of the imagination, which is, as it were, a faculty akin to the senses and to the intellect. The will governs all these faculties.

“The elements

So mixed in him that Nature might stand up
And say to all the world, ‘*This is a man.*’”

—SHAKSPERE.

That the same variety reduced to unity by order and proportion is admired in the universe is too evident to need any demonstration; therefore we may conclude that every being is beautiful.

The spiritual beautiful is that which is admired in spiritual beings; the corporal that which is admired in corporal beings.

The artificial beautiful is that which is produced by human genius and art, and must consist of the same

elements—that is, variety reduced to unity by order and proportion.

The moral beautiful consists in the conformity of the human actions with the eternal principle of right.

We must remark in general, in support of the theory of the beautiful given above, that in works, either of nature or art, where the variety is made of objects forming each one a whole by itself, and, as it were, independent, the unity cannot be found as actually existing in them in a material sense, but results from the order and proportions of the parts, which all are made to conspire in representing and expressing an idea intended by the artist. Thus in the universe we cannot find a material unity, as it is made up of a numberless variety of objects, each forming an individuality by itself. But all conspire, by their order and proportion in being and in action, to show forth the grandeur and the infinite excellence of the Creator, the idea which God intended to express.

The same must be said of artificial beauty. When in the productions of art the variety is made up of individual objects, each forming a whole by itself, the unity which must be sought in such productions can only be ideal; that is, the artist must so choose its objects, and arrange and dispose them in such a manner, and put such proportion between them that they naturally suggest the idea he wanted to incorporate. Take, for instance, the “Last Judgment” of Michael Angelo in the Sistine Chapel. The great artist could not put in such a picture a material unity, as it is formed of a great number of objects having an individuality of their own. But he so chose and arranged each object that they all conspire in representing the dreadful horror of that day—the idea which he wanted to express. This he has attained by representing the

Judge with such dread majesty on his countenance, by surrounding that majesty with such an array of angels and saints, themselves in awe and almost trembling, and by a multitude of horror-stricken wretches awaiting that judgment, that the beholder is at once impressed with the idea of the artist, and almost feels the horror of that day subduing his soul.

The second remark is that, as we have shown every being, as such, to be beautiful, it follows that being is convertible with the beautiful, and that an object is beautiful in the same proportion as it is a being, and that consequently the Supreme Being is the supreme beauty, which beauty in him consists in the infinite variety of his attributes, reduced to infinite simplicity of his essence, or rather, as the Christian revelation teaches us, in the mystery of the Trinity, which is variety of persons and unity of essence, the supreme type of all beauty. But enough of the beautiful.

Q. Say a word on the sublime.

A. Being may oftentimes by its fulness seem to transcend our capacity of apprehension and the ordinary limits of other beings. Then we are accustomed to call it sublime. Hence the true foundation of the sublime is the infinite, which alone has naturally no limit; and in proportion as beings approach more or less the infinite they assume more or less the characters of the sublime. Hence it follows that in the works of art the sublime is obtained by the ideal and the indeterminate, which, by leaving the object expressed not deprived of its entity, but in a kind of ideal and indeterminate condition, enhance its grandeur before our imagination.

Such is the definition which God gave of himself to Moses, "I am who am," which has been called sublime by all the geniuses of mankind. Such is the descrip-

tion of Satan by Milton, etc. The sublime is of three kinds, because being may transcend the limits of our capacity of apprehension by its entity, by its force, by its extension as to duration and space. If the being transcend the limits by its nature, then it is called the sublime ontological ; if by its force, the sublime dynamic ; if by its duration or space, the mathematical sublime.

CHAPTER V.

ON THE CAUSES OF BEINGS.

ARTICLE FIRST.

On the Nature and Idea of Cause.

Q. Why do we treat of the causes of being, and what order shall we follow in speaking of them?

A. The idea of cause has such connection with that of being that the mind, in reasoning upon one, cannot pass over the other; because every being is either *cause* or *caused*, hence the idea of cause always follows being. Hence, having spoken of the properties of being, we must now speak of its causes. And to give an orderly and adequate idea of them we shall first give an idea of cause and of its nature; 2, of its different species; 3, of the relations they have with their effects and with themselves.

Cause is understood to be the principle of a thing; hence it takes ordinarily the name of principle. But, strictly speaking, the idea of cause is different from that of principle. Principle, in its strictest acceptation, means merely something from which another thing proceeds in any manner whatever. Cause means something upon which another thing depends as to its being. Hence the idea of cause implies a certain dependence and inferiority of being in the thing which is caused, whereas the idea of principle does not imply a dependence or inferiority of being as regards the thing proceeding from it.*

* Hence the Church calls the Father in God the *principle* of His Son, but not the *cause*, because the Son is perfectly equal to the Father in nature and attributes, and in no way inferior to Him.

Hence it is apparent that the idea of cause, 1, is narrower than that of principle, because every cause is principle, but not every principle is cause. 2. Cause implies always a real and positive influx upon the being which depends upon it, and which is called effect. 3. Cause, at least in nature if not in time, is conceived always before the effect. After all these remarks we may define cause to be *that which positively concurs in the being of a thing*. Hence the idea of cause is always relative, implying a necessary relation to that thing to the being of which the cause has concurred.

The term of this relation, as we have said, is called *effect*. From this relation arise those principles of immediate evidence: *Every effect supposes a cause; No being can be the cause of itself; All that which is contained in the effect must be found in the cause, etc.*

Q. What was Hume's error as to the idea of cause?

A. Hume asserted that the idea of cause has no objective value; that is to say, that it does not represent a real thing. He proved his assertion thus: Observation is the only source of our knowledge; but observation cannot give us the idea of cause; therefore the idea of cause is not objective. He proved his minor thus: Cause implies a connection with the effect; now, observation merely manifests a succession of facts in nature, but not their connection; therefore observation cannot give the idea of cause. He concludes from this that the principle of causality—that is, that every effect must have a cause—is a prejudice of our mind.

Now, how absurd this opinion is every one can see by himself, and we could easily pass it unnoticed, as it is founded on that principle that all our knowledge

is derived from observation, which principle we shall prove to be utterly false. Yet we shall make a few remarks upon it the better to illustrate the idea of cause. We say, in the first place, that the idea of cause is objective. Hume admits that the idea of cause would be objective if observation not only manifested to us a succession but also a connection in natural facts. Now, such is the case; therefore the idea of cause is objective. The minor is proven by the following reasons: Succession implies the idea of one thing following another, connection the idea of one thing springing or proceeding from another. Such is the difference between succession and connection. Now, observation manifests not only many things following one another, but also many things springing and proceeding from others. In fact, we have our senses, sight, hearing, taste, and we know that they were given us for an object—the sight to see, the ears to hear, and the palate to taste—and we use them whenever we wish to feel their action or effect. Again, everybody feels that when he wants to talk he talks, and when he wants to move he moves, and if he wants to be at rest he can do so at once. We feel, therefore, that these facts are not only things which follow one after the other, but which spring and originate one from the other.

Besides, to feel that a certain thing is wholesome and another hurtful does not exceed the power of observation, as it is manifest to all mankind. But this implies that we can feel that one thing proceeds from another; therefore observation manifests to us not only the succession but the connection of facts. When we eat, for instance, something unwholesome, and we feel a certain effect from it injurious to our health, we certainly observe the connection between

the eating of that thing and the injurious effect resulting thereby, and not merely the succession of one thing after the other, because we feel that that injurious effect only follows the eating of that particular thing; hence we feel their connection.

Now, nothing more, even according to Hume, is necessary to render the idea of cause objective; therefore that idea is objective. This we have said, confining ourselves within the limits of observation, and we add that our mind, by observing from all these facts and depriving them of their particular circumstances, forms the general idea of cause and of effect.

If, then, the idea of cause is objective, it is evident that what Hume asserts about the principle of causality—that it is a prejudice of our mind—is false; because if a certain reality corresponds to the idea of cause—that is, a thing which really concurs to the existence of another—it is clear that we can argue rightly from the existence of the effect to the existence of the cause.

ARTICLE SECOND.

Of the various Causes; and, first, of Material and Formal Causes.

Q. How many kinds of causes are there?

A. We have defined cause to be that which concurs positively to the existence of a thing. Now, four are the principles which can concur in the existence of anything; therefore there are four kinds of causes. Of these four principles two are intrinsic and two extrinsic. The two intrinsic principles, speaking of material things, are the matter and the form, both of which are necessary to constitute composite beings.

But matter could not have its form if this were not given to it by an exterior agent, and this exterior agent would not act except prompted by an end in view. Therefore, besides the matter and the form, two exterior agents concur in the existence of a thing, the exterior agent and the end which moves it. These, then, are the four causes: the material (matter), the formal (form), the efficient cause (the agent), and the final cause (the end). And as in any given effect of the kind we are speaking of we first observe the material cause, then the formal, and afterwards the agent and the end, so we shall speak first of the material and formal causes, and then of the other two.

Q. What is the causality of matter and form ?

A. Matter, or the material cause, is nothing but that thing out of which something is shaped ; for instance, the log or block out of which a sculptor makes a statue is called the *material* cause. The figure or shape which the sculptor gives it is called the *formal* cause. But it is to be remarked that the causality of matter and form does not consist in any action which they may perform, because whosoever performs an action is called agent ; hence action cannot be predicated of the material or formal cause, but of the efficient cause. The causality, therefore, of matter and form cannot consist in an action. If it does not consist in an action, then their causality lies in their *entity*, being used by the agent to form composite beings. To this causality corresponds a double effect depending one upon another. The first is proper to each, and it is for matter to hold the form and for the form to terminate and shape the matter. The second is common to both, and is the whole composite resulting from the union of both.

Q. What is meant by intrinsic and extrinsic form ?

The form, before it is applied to matter, has another mode of existence in the efficient cause, and this other mode is so necessary to the form, and has such strict connection with it, that it could never be applied to matter if it did not previously exist in the agent. For it is the agent that must produce such a form on the matter. But the agent could never intend to introduce such form in the matter if the similitude of that form were not already existing in him, because none can give what he has not ; therefore there must be the similitude of the form in the agent. This, inasmuch as it is considered as having to be introduced in matter, is called extrinsic form to distinguish it from that which is really introduced in matter, and which is called intrinsic.

This extrinsic form may be of two kinds, because it is of such a nature as are the agents in which it is found. Now, agents may be of two kinds, because they are distinguished by the manner of their acting, which may be either by way of nature or by way of intellect. Hence natural agents and intellectual agents. Likewise the extrinsic form is distinguished in two ways according to agents, by nature, or by intellect ; in those agents which act by nature the form is found according to natural being, as in man when he generates man, in fire which engenders fire ; in those agents that act by intellect it is found according to the intelligible being, as the similitude of a building is in the mind of the architect. But as agents by nature do not of themselves intend to introduce the form, but are led and guided by those who act by intellect, as the arrow reaches the mark because it is thrown by the archer, so agents by nature may be considered rather as instruments of the agents by intellect ; hence the name

of extrinsic form has been applied more properly to the form of the effect which exists in the intellect of the agent. Taken in this sense, it has been defined that *form by looking at which the artist works*. This has received the name of exemplary cause, because, as it is apparent, it concurs in the production of the effect, serving as model and example. It was also called idea, and received for the first time that name by Plato, and from it the name of idea was applied to that which serves as means of knowledge.

But one must carefully remark the difference which exists between them. Both agree in this: that they are a similitude of something existing in the intellect, but are distinguished by these several heads: 1. The idea which makes us understand objects is not the object of our knowledge, but a *means* by which the intellect perceives things. On the contrary, the exemplary cause is not the means but the object at which the mind of the agent looks. 2. The first does not always belong to the practical intellect, whereas the second always does, being intended to be outwardly expressed. 3. The first has no connection either with the efficient or the final cause; but the exemplary cause has, because it has connection with the efficient cause, inasmuch as it determines and guides the agent in its operation. It has connection with the final cause, in the sense that the end of the agent is nothing more than the reproduction of that form.

ARTICLE THIRD.

On Efficient Cause.

Q. Define an efficient cause.

A. The form, as we have said, would not be given to matter but for the action of the efficient cause.

This may be defined: *That extrinsical principle from which primarily and properly the movement of the action begins.* It is called extrinsical principle to distinguish the efficient cause from the material and formal causes, which are intrinsic principles. We have added *from which the movement of the action primarily begins,* to distinguish the efficient from the final cause; because, though we may say in a certain sense that from the end everything that regards the causing of something takes its rise, yet, strictly speaking, the movement of the action begins primarily in the agent, and the end does nothing more than to excite the agent to begin the movement. Finally, we have added *properly* to distinguish the efficient cause from the simple occasional cause, from which oftentimes the action begins, but does not properly proceed from it.

Q. What subjects can be really efficient causes?

A. Malebranche, and many Cartesians with him, are of opinion that to be really efficient cause can be said of God only, who alone can really act. Creatures, on their part, do nothing more than present to God the occasion for acting, but in themselves are really devoid of activity. This opinion was called occasionalism, because it denies to the creature all real activity, and makes them exhibit only the occasion for God to act in them.

1. Now, this opinion is false and contains several absurd things. In fact, that it is not impossible that the creature should have the power of acting can be demonstrated as follows: If such a thing involved any repugnance, it ought to involve it either on the part of God or on that of the creature. But it does not involve repugnance on the part of either; therefore it is not impossible that creatures should really act.

To act follows to be, and is proportionate to the

amount of being. This can be seen in God Himself, to whom occasionalists allow the power of acting, because God acts as He is, and the power of acting is in proportion to His being, and that kind of *power* becomes Him because that *being* becomes Him. Hence to act becomes Him, because to be becomes Him. But creatures have a being; therefore it is not repugnant on their part that they should have the power of acting. It is not repugnant on the part of God, because if God could communicate to creatures their being, why could not He also communicate them the power of acting?

2. The principal reasons which occasionalists allege to show that impossibility are derived from two heads: 1. God being a most perfect cause, it involves a contradiction that there should be other efficient causes besides Him; 2, because God can by Himself produce all the effects which take place in the world. If acts, therefore, all other causes are useless.

As to the first reason, if that principle were true we might conclude from it that not only is it impossible that any creature should act but that any creature should exist. God is a most perfect being; therefore it is impossible that there should be other true beings besides Him. But as it is not impossible that besides the most perfect infinite being there should be other true finite beings created by the former, likewise it is not impossible that besides that first and most perfect Cause there should be other causes created by the former. On the contrary, the opposite opinion would involve a contradiction; because as God's perfection would not be infinite if He could not give existence to other things outside Himself, so His action would not be infinite if He could not communicate it to others. And this, far from implying necessity or insufficiency on

His part, would be a sign and an effect of His immense perfection and goodness, by which He can communicate His similitude not only as to being but also as to action.

With regard to the second reason, if this were of any value we could turn it against the occasionalists, because God is fully sufficient to act all alone by Himself, and, in that case, not only the action of creatures would become useless, but also the occasions, since He could produce all sorts of effects without waiting for us to present Him with occasions. Why should God wait, for instance, that I should put water in my mouth, in order to take occasion to quench, by His own action alone, my thirst? Could he not do that Himself without waiting for that occasion? Besides, even granting that God could do all by Himself, yet for all that secondary causes would not be useless; because, as St. Thomas teaches, it is against the idea of wisdom that there should be anything useless in the works of the wise. Now, if created things did not act in the production of effects, but all was done by God Himself, he would employ other things to produce effects uselessly and without reason. By admitting secondary causes, of course, we do not mean to attribute to them an infinite virtue; nor is this necessary to the idea of cause, as Malebranche contends. We say that everything has the power of acting proportionate to its being. But to the creature we attribute a being, therefore a power acting proportionate to that being.

3. Finally, if the opinion of the occasionalists were true, God would be the real author of all the crimes which are committed in the world, as He would be the only real agent, which is absurd.

Gathering all we have said together, we say that

the nature of cause can be attributed to all those things which have being, and can be attributed to them in the same degree and proportion as being; and because being properly becomes the substance, of substance alone, therefore, may we predicate the name of cause. Hence the truth of that saying of St. Thomas, that every substance has the power of acting.

Q. How many species of efficient causes are there?

A. The nature of cause lies in this: that it is a principle from which the movement of the action proceeds; therefore there are different causes in consequence of the difference of the movement and the action. But every movement may be different from two heads, either from its nature or from its term; consequently, causes may differ either in consequence of the nature of their action, or in consequence of the effect or term which they produce. As to the manner of acting, the cause may be *principal* or *instrumental*. The principal cause is that which acts by itself—not moved by another nor used as a means by another cause; as, The artist is the principal cause of his work. Instrumental cause is that which is used as a means by the principal; as, The brush and the colors in the hand of the painter, which do something, and hence they are called cause; but as they cannot do that something without being handled by the painter, they are, therefore, called instrumental causes.

2. *Free* and *necessary* cause. A free cause is that which acts with deliberation and choice, as master of its action, as the will of man in respect to particular goods. A necessary cause is that which is impelled to act by the force of its nature, and which does not regulate its act by deliberation, as all the action of natural agents inferior to man.

3. *First* and *secondary* cause. The first is that

which admits of no other cause preceding it, such as God in respect to all created causes. Secondary is that which is moved by the primary cause, such as all creatures relatively to God.

4. Cause by *itself* and by *accident*. The cause by itself is that which does that to which it is destined by its own nature, as for fire to burn, for man to reason. Cause by accident is when to the natural effect of a cause another effect is added accidentally connected with it; as, for instance, a man digging the foundation of a house finds a treasure. The actual effect of the man's action is the digging, but accidentally the other effect is connected with it.

On the part of the effect, efficient causes may be *univocal*, *equivocal*, *analogous*. The cause is called univocal when it produces an effect like to itself in species, as in the case of the generation of animals which engender an animal of the same species as themselves. It is called equivocal when it produces an effect similar to the cause as to genus, as the sun in respect to its effects. It is called analogous when the cause does not agree with the effect either as to species or genus, but yet has a certain likeness with it, as God in respect to His creatures.

Proximate and *remote*. Proximate is that which produces the effect immediately, remote when it produces it by means of other causes.

ARTICLE FOURTH.

On Final Cause.

Q. What is the nature and definition of final cause?

A. The efficient cause would not be moved to act but for the final cause. The end can be defined: *That for the sake of which something is done, or that at*

which one aims in acting. This shows the difference of the final from all other causes. The matter is that out of which something is made, the form is that which gives it figure and shape, the agent is that which makes it, and the end is that for which it is made, and is called the end because, having obtained it, the action terminates and the agent rests.

That the end is a true cause is clear from considering that it concurs positively in the production of something by determining the agent and moving it to act.

The nature of its causality, besides, consists in moving the tendency of the agent and in arousing the wish of the agent to attain it, because, as the influx of the efficient cause consists in acting, that of the final cause is in being wished for.

The way by which the final cause acts is by exhibiting its goodness, true or seeming. This is expressed by Pope so elegantly :

“ Modes of self-love the passions we may call :

’Tis *real good*, or *seeming*, moves them all.”

—*Essay on Man.*

Because every being wishes its own perfection. But the perfection of a being is its good ; therefore the end, in order to excite a desire for itself, must show itself as the good and the perfection of the agent.

Q. On what being can the end exercise its influence, and for what being is it becoming to have an end?

A. To act for an end becomes all beings, of whatever nature they may be ; be they endowed with knowledge or not, be they spiritual or material, all beings must aim at an end.

Q. Prove this.

A. First proof: From what we have said of causes we see that by necessity of nature they are subject to this order: the matter does not receive its form except it is given it by the agent, and the agent is not moved to give that form except when determined by an end, because if it were not determined by an end to a certain special effect, there would be no reason why it should produce one effect in preference to another; therefore once we take away the end, neither efficient cause nor formal is possible, and consequently no effect can be obtained.

2. Agents are either free or necessary causes; but it is clear that free agents are induced to act by an end, because, being free, they are indifferent to act or not to act, to act in this or in another way, to act this or the contrary way, and the end alone can determine them to a choice. Necessary agents are called so because they are by nature determined and necessitated to act. Now, this determination comes to them from the end; therefore every agent aims at an end.

But it is to be observed that not all agents aim at an end in the same manner. This depends upon their nature. Every being acts according to its nature. But agents are different by nature; therefore they aim at an end in a different manner. In fact, all the agents in nature may be divided into three classes. Some are gifted with reason and intellect, by which they cannot only apprehend the end but also see how it befits their nature, and can discover the aptitude of the means which exist in order to obtain it. Others are without intellect, but are endowed with senses, by which they may apprehend the end at which they may aim, but cannot see the relation which exists between it and their nature, nor the aptitude of the means to obtain it. Finally, others have neither intellect nor sense,

and cannot apprehend the end at all, as the arrow which goes to the mark. The first have a perfect knowledge of the end, and can reason upon the means to be chosen, and have no need that any one should direct them to it, but being, in force of their reason and will, masters of their acts, go to their end by themselves; and of such, strictly speaking, it is said that they aim at an end. The second, knowing by the way of the senses the end, and apprehending it somewhat, aim at it in a certain way, but according to the manner of their knowledge, that is, instinctively, urged by nature, and not perfectly by themselves, as they have not the mastery of their acts. Finally, those that have neither sense nor intellect are not moved by themselves to seek the end by an intellect external to them.

Q. How many different ends may there be?

A. The nature of the end lies in this: that it must be intended by the agent as the term of its tendency and operation. Therefore it may be different, according to the different way of intending it as a term. Hence it may be *proximate*, *intermediate*, and *ultimate*: proximate if it is the first and immediate term of the tendency; ultimate if it is the very thing which the agent intends to cease operation and rest after; intermediate if it is a term of the tendency, but neither proximate nor last.

2. Principal and accessory. The first is that which is principally aimed at by the agent, and hence this is the principal term of the tendency. The second is that which is sought by the agent along with the principal, but not so that, if it could not be attained, the agent would cease to seek the principal.

End of the action and end of the agent. The first is the natural term of the action, as the end of

the act of singing is to sing. The second is that which the agent proposes to himself, as a singer might propose to himself riches or delight.

Objective and subjective. Objective is the object which is sought for. Subjective is the use to which the agent intends to put the object.

ARTICLE FIFTH.

Of the Relation of Causes with their Effects and among Themselves.

Q. How many are the relations which causes may have ?

A. Relation arises from the respect which one thing has to another. Now, a cause may be considered in respect to its own effects or to another cause with which it is connected. Therefore causes may have relations either with their own effects or with other causes; and we must speak first of the one and then of the other.

Q. What are the relations which a cause may have with its own effects ?

A. That a cause has relation with its own effects is clear from all we have said with regard to the idea of cause and effect; for we have seen that between cause and effect there is not merely succession but a necessary connection, and that the effect cannot possibly exist without receiving its being from the cause. A necessary consequence flows from this, namely, that between the effect and its cause there is a necessary and true relation, which consists in the effect depending as to its being upon its cause. Also from this necessary dependence of the effect upon its cause three other relations arise which will better illustrate its idea. Wherever several beings are connected to-

gether it is necessary that we should find these three other things: a *relation of order*, because connection implies order, a certain location of the parts connected in view of an end; a *relation of nature*, because things, in order to be connected, should have a certain natural affinity; a *relation of dignity*, because where there is dependence and connection among a number of beings it is necessary that one should be more noble than the other. The relation, therefore, of dependence of the effect upon its cause gives rise to three other relations, that of *order*, of *nature*, and of *dignity*. We shall speak of each separately.

With regard to the relation of order, this must consist in the priority of the cause with regard to its effect; because if the effect depends as to its being upon the cause, a relation of order in this case cannot consist in anything else except that the cause must be before the effect. But it must be remarked that this priority may be of two kinds, priority of time and priority of nature. The first consists in the one being temporarily before the other; the second consists in this: that though cause and effect may be supposed to exist simultaneously, yet the cause must be conceived always first, inasmuch as the effect could not exist without it. With regard to the priority of nature, there is no doubt that the cause is always before the effect. But with regard to priority of time we must remark that we may consider the cause only as a certain being in itself, irrespectively of any relation to any effect, or we may consider it as merely a cause. If we consider it in the first sense, it is clear that it can exist before the effect; and this is not impossible, especially in what are called successive causes, in which case it is necessary that the cause which produces by way of movement and possession

should exist previously to the effect. In the second case the cause cannot exist before the effect; because a thing is called a cause inasmuch as it produces an effect; therefore it cannot possibly be called a cause before actually producing the effect.

With regard to the relation of affinity or proportion, this consists in a certain similitude which the effect must have with its cause; because the effect, so to speak, is an emanation of the cause—something drawn, as it were, from the cause, since no being gives what it has not. Now, all this necessarily implies a similitude between the effect and its cause; therefore there must be a similitude between the effect and the cause. This similitude, however, varies in proportion as the effect is more or less adequate to the activity of the cause. From this arises the distinction of effects into univocal, equivocal, and analogous, which we have already defined above.

With regard to the relation of dignity, we must observe that it is different in proportion to the manner according to which the cause concurs in the effect. Now, to determine this the following remarks are to be kept in view: If the question is about material and intrinsic formal causes, they are less noble than their effect, because the part is less noble than the whole; but material and formal causes act as the part towards the formation of the whole, therefore they are less noble than their effect. We have said the intrinsic formal causes, because the extrinsic formal cause—that is to say, the exemplar and type which is in the mind of the artist—may be more noble than the effect, as are all the types of things existing in the divine mind. If it is a question of the principal final cause in agents who act according to order, it is always more noble than the effect, because no man who

acts according to order will spend more in order to get what is less, nor employ what is more noble to attain what is less so. Now, the effect with regard to the end is like a means to an end; therefore in one who acts according to order the end is always nobler than the effect. If it is a question of the efficient cause, it is either more noble than the effect or equal to it, because the cause is either univocal or equivocal. If it is univocal, it is equally as noble as the effect, which belongs to the same species; if it is equivocal, it is nobler than the effect, because the effect in this case belongs to a species inferior to the cause.

Q. What is the relation of causes among themselves?

A. A relation always means connection; therefore we can have relation between causes only when we can find them connected together to obtain an effect. Besides, a connection between two things may be either proper or accidental. We intend to speak here of the proper connection. This relation between causes may be of order, of nature, and of dignity, as we have said of the relations of causes with their effects.

Of the relation of nature among causes we think we have said enough already when we spoke of the proportion which the nature of the final cause must have with the efficient cause, and the proportion which the agent must have with the formal cause, and this with the material. We shall speak of the relation of order and dignity.

As to the relation of order, we may distinguish between causes of the same nature from those of a different nature. The first are those which belong to the same kind, but are all ordained and bound together to produce the same effect; for instance, a number of

efficient causes bound together so that one depends upon the other, and all produce something. The second are those belonging to different kinds, as the final, the efficient, the formal, etc., which are different, but still one depending upon the other.

Now, if the causes be of the same nature, and are, in themselves, in proper order, whatever other accidental order may be found among them, it is always necessary that there should be a first and a last one in that order, and that we should not have a progression *ad infinitum*; because, in such a case, in order to obtain the effect it is necessary that the action of one cause should pass to another, and from this to a third, and so on, till we have the effect. Hence if the series of such causes were infinite, the action and the movement should have to go through an infinite series to reach the effect. But the infinite, as such, cannot be outstepped; therefore we cannot admit an infinite series of causes.

Besides, in a series of causes naturally in order the first is the cause of the second, this of the third, and so on. Take away, therefore, the first cause and you take away also the last, for the same reason. But in an infinite series we cannot find a first cause, because otherwise it would be finite; and, on the other hand, without the first there would be no middle, and consequently no last, cause, therefore no effect at all. Hence, in causes of themselves well arranged there cannot be an infinite series, but there must be a first and a last. Therefore in this series of efficient causes there must be always a first from which all others depend, and in the series of final causes there must be a primary end to which all other ends are directed. With regard to different causes, besides the theory that in them we cannot have an infinite progression,

for the same reason we may determine also which of them must be first and which last. In causing, the first is the end, because it moves the agent; next comes the agent, who must act; and finally comes the form which the agent intends to give to the matter.

As to the relation of dignity between causes, it is clear that the formal cause is more noble than the material, because the form gives being to matter. Now, that which gives is more noble than that which receives; therefore the form is more noble than the matter. Next, the efficient cause is more noble than the form, because the form is given by it and is its own likeness. Finally, the final cause is the noblest of them all, because all causes act in order to obtain the end. But the end is sought as good and perfection; therefore all other causes stand in relation to the final cause as the imperfect to the perfect.

CHAPTER VI.

DIVISION OF BEING.

ARTICLE FIRST.

Of Substance and Accident.

Q. What is the subject of this chapter?

A. Being, as we have said in Logic, is divided into ten categories, or supreme genera, because it is first divided into substance and accident, and this latter is divided into nine other genera. We shall speak, then, of these ten categories, and first of substance and accident.

Substance is defined that which exists in itself and not in another on which it may lean as subject. We must pay attention to several remarks in order to understand this definition. What is meant by those words: that thing which exists in itself? 1. They exclude all inherence of the thing called substance in any other being in order to exist, and cause it to be distinguished from the accident, the essence of which is to lean on, or inhere in, another thing as subject. 2. Those words, which *exists in itself*, must not be taken in such a sense as to exclude from the idea of substance the idea of an efficient cause, because these words merely point out to an existence in one's self and not in another, but may or may not admit of an efficient cause. If that which exists in itself is infinite, then the substance does not require a cause in order to ex-

ist, but exists of its own nature. If the substance is finite, then, though existing in itself, it requires a cause to make it so. In other words, to exist in itself does not mean to exist by itself. The first means that a thing does not require to lean on any subject in order to exist; the second means that the thing does not require any cause to give it existence, but enjoys existence in force of its own essence.

2. That which exists in itself and not in another is called substance, principally from its being the subject of the accident. For the word substance is derived from those two Latin words, *sub*, under, and *stare*, to be placed or located. Now, that the substance is the subject of accidents is demonstrated as follows: If the subject of accidents were not the substance, it should be another accident. But the accident cannot exist in itself, but must lean on another in order to exist; therefore this same accident, supporting other accidents, must either lean on a substance or on another accident, and this on another, and so on *ad infinitum*. But a progress *ad infinitum* cannot be admitted; therefore the substance must be the subject of accidents.

But we must remark here again that it is not necessary for the essence of a substance to be the subject of accidents. The essence of a substance is to *be in itself*. Besides this, it may or may not be subject of accidents. Finite substances which are perfectible are all subject to modifications or accident. The infinite substance, which is God, being absolutely perfect, is not subject to modifications.

Q. What are the errors of philosophers as to the idea of substance?

A. First, Locke contended that substance is a number or an accumulation of accidents, which we perceive by means of the senses, gathered and co-existing together

in a way unknown to us. We say, in the first place, that such an idea of substance is false, even according to experience, both of the senses and of consciousness; of the senses, because through them we perceive bodies under every variety and succession of modifications, and yet in perceiving them we perceive that we experience something standing permanent under a variety and succession of modifications, and even under the conflict of contrary modifications; of internal consciousness, for we are conscious that our soul is subject to great variety of thoughts, of desires, of volitions succeeding each other, and oftentimes clashing with each other, and yet we perceive at the same time something standing permanent and the same under all that variety and conflict of modifications. In the second place, the opinion of Locke refutes itself. Because, we may ask, those qualities or accidents which form the accumulation are either able to exist in themselves or they are not. If they are, then they are so many substances; if they are not, then they must lean on something existing in itself in order to exist. It will not do to say that those modifications can acquire the force of existing in themselves by aggregation or accumulation, because if the qualities have not singly of their nature the force of existing in themselves, but demand a subject to lean on, this want of leaning on a subject must be felt with stronger reason by the whole assemblage, for the mere gathering cannot change its nature; therefore the opinion of Locke is false. Spinoza also held an erroneous opinion as to substance. He defined a substance to be that which exists in itself, and can be conceived by itself—that is, that the idea of which does not require the idea of another in order to be conceived.

This definition of substance can apply only to God, for a thing which exists in itself, and which can be conceived by itself, is that only which does not require a cause in order to exist, because if it required a cause to exist we could not conceive it by itself, but would be obliged to have the idea of the cause in order to conceive it. God alone, therefore, exists in Himself in such a way that he does not require any cause or principle in order to exist or be known. The definition of Spinoza, therefore, would render impossible all created substances.

ARTICLE SECOND.

Principle of Individualization.

Q. What can be called true substance?

A. Substance may be divided into first and second, or into real and logical. The substance first and real is the individual. The substance second and logical are the species and genera, because these have not an existence in themselves, except inasmuch as they are confined to the individual. The real and proper substance, therefore, is the individual. This is defined by St. Thomas, "that which is in itself undivided and distinguishable from others." The words "that which is in itself undivided" mean that it cannot be divided and be applicable to many things, in contradistinction of the universal, which means something which is common to many; the words "and distinguishable from others" mean that it is such a thing, and not this or that.

Q. What is meant by the principle of individualization?

A. We shall answer by an example. Let us take, for instance, the human species. This consists of the elements *animality* and *reason*. All the individuals belonging to this species have these elements, animality and reason, for every man is a reasonable animal. Now, we may ask, so long as every individual of the human species has all the elements of the species, animality and reason, what is that thing which contracts, as it were, the species and constitutes the individuals in each species; or, in other words, what is that which makes the number of individuals in each species, and makes them undivided in themselves and distinguishable from others? Now, to answer this question accurately we must distinguish between beings. In material beings the principle of individualization is matter, because the principle of individualization must be intrinsic and substantial to the being. But in material beings there are two things which are intrinsic and substantial—*matter* and *form*. Form cannot discharge this office of individualizing, because the form of its own nature is common to many, and therefore cannot be the principle of exclusiveness and incommunicability. This office, therefore, must be fulfilled by matter. But it must be remarked that matter may be considered in two ways—as abstracted from quantity and extension and common to all the beings comprised within a species, or as it is found in the real world marked by quantity. It is in the latter sense that matter is the principle of individualization.

As to immaterial substances, if these have their existence in matter as its form, as in the case of the human soul, their individualization arises from the relation and order which they have to their bodies, because the same reason given above applies to them also.

“ 'Tis true that the souls
Of all men are alike ; of the same substance,
By the same Maker into all infus'd ;
But yet the several matters which they work on,
How different they are I need not tell you.”

—RUTTER, *Shepherd's Holyday.*

But if they be purely spiritual, as we know by revelation angels to be, they are individualized by their own reality. God is individualized by His very nature and absolute simplicity.

Q. How many kinds of substances are there?

A. Various kinds : Complete and incomplete. Complete substances are those which are not destined to exist united with another substance, so as to form together a perfect whole, as man, a tree. Incomplete are those which are destined to be united, such as the human soul.

A complete substance may be endowed with intelligence, as man ; or not have intelligence, as plant. If it is endowed with intelligence, it is called *person* ; if it is not endowed with intelligence, it is called an individual or *suppositum*. Hence the *suppositum* may be defined : *An individual and complete substance incommunicably existing.* A person may said to be *an individual and complete substance of the rational nature.*

Q. What do you call that act by which the substance really exists and acts ?

A *subsistence*, which may be defined : *That actuality by which a complete substance exists and acts without communicating with another substance.* Here two questions arise of the greatest importance. The first is : Can a complete substance really exist and act without a subsistence of any kind ? In answer to this first question we say no substance can really exist and act without a subsistence, because, although we can conceive the essence and nature of a thing as possible

without a subsistence, yet we cannot conceive the nature as actually existing and acting without it, because it is just that act or last complement of being which makes it really actual; hence the saying of schoolmen, that *actiones sunt suppositorum*—actions belong to the suppositum—meaning that actions imply a subsistence in order to be possible.

The second question is this: Admitting that no complete substance can really exist and act without a subsistence, it is asked: Is it necessary that this complete substance should have *its own* subsistence, or can it have the subsistence of another and made actually to exist and to act by the subsistence of another nature; or, in other words, does each nature absolutely require its own subsistence in order to exist and act; or is it possible and sufficient for it to subsist by the actuality of another nature?

This question must be answered in the affirmative, because we can conceive that although a complete substance cannot exist or act without a subsistence, yet it is not necessary that this subsistence should be its own, because this complete substance might be united in a most intimate manner with a higher subsistence, in which case the subsistence of the inferior nature should give way to the superior. This is the case of our body. It would have a subsistence of its own were it not united to the soul, and that in such a way as to form one individuality. But because of this union its own subsistence must give way before that of the soul, a much superior substance. When separated from the soul our body resumes its own subsistence. Therefore in created substances nature and subsistence are distinct and may be separated.*

* Upon this theory and truth is founded the fundamental mystery of Christianity—that mystery which has ransomed and deified the world—the Incarnation. Of it more in the internal evidences of Christianity.

Q. What about the action of substances?

A. With regard to action there is this difference between complete and incomplete substance: that the former bears exclusively the attribution of every action it performs, whereas, in the case of the latter, every action it may do is not attributed to it, but to the suppositum or complete substance resulting from the union. For instance, man is a complete substance, and therefore he bears the responsibility of every one of his actions; but his soul and body are each an incomplete substance, and, therefore, whatever action may be performed by either is attributed not to it but to the complete substance—that is, man. The reason of this is because the operation must be of a piece with being.

*“The work the touchstone of nature is,
And by their operations things are known.”**

But the being of an incomplete substance, though existing in itself, yet does not exist for itself, but for the whole; therefore it does not act for itself, but for the whole. On the contrary, a complete substance exists in itself and for itself; therefore it acts also for itself and must be responsible for its action.

There is also this difference between substances as to their actions: that rational substances, or persons, have a perfect mastery over their own actions, direct themselves to apprehend the end, and endeavor to discover the agreement or disagreement between their actions and the end which they propose to themselves. Unintelligent substances must be directed to their end by others.

“What things soever are to an end referr’d,
And in their motion still that end regard,

* Davies’ Poems.

Always the fitness of the means respect,
 Those as conducive choose, and those reject,
 Must by a judgment foreign and unknown
 Be guided to their end, or by their own ;
 For to design an end, and to pursue
 That end by means, and have it still in view,
 Demands a conscious, wise, reflecting cause,
 Which freely moves, and acts by reason's laws ;
 That can deliberate, means elect, and find
 Their due connection with the end designed."

—BLACKMORE, *The Creation.*

ARTICLE THIRD.

Q. What is an accident ?

A. The accident is opposed to substance, and therefore *is that thing which does not exist in itself, but is obliged to lean on the substance in order to exist.*

There are two kinds of accidents—*absolute* and *modal*. The first are those which lean on the substance, such as *movement, heat, cold*. The modal accidents are called the different *modes*, or manners, according to which accidents lean on the substance—for instance, velocity or tardiness in movement, more or less intensity of heat, cold, and so forth.

Q. What questions can be raised with regard to accidents ?

A. Two questions. The first is: Is the *being* of the accident different from, or identical with, the being of the substance? We answer that accidents are added to a substance—they come, they go. Now, if the being of the accident were identical with that of the substance, it would follow that the same thing would be added to itself, that it would come upon itself and go from itself, which is absurd. Therefore the being of the accident is different from that of the substance.

The second question is as follows: Can accidents

ever exist without their own substance? with regard to which question we answer that it is not necessary that an accident should lean on its own natural substance, so to speak, but it may be upheld by a foreign force or substance. For instance, extension, color, taste, etc., are all accidents of bodies, and, therefore, bodies may be called the natural and native substance of such accidents. But it is not absolutely necessary that these accidents should be upheld by the substance of bodies. They may be supported by a foreign force—a spiritual substance, for example; because it is intrinsically necessary for the nature of the accident to be *supported*, but it is quite indifferent to the same nature *what* it is supported by—its own native substance, or any other force sufficient to uphold it. God, therefore, could, by His infinite power, effect that accidents should exist without the substance. In this case they would not exist in themselves, but be supported by Omnipotence.*

ARTICLE FOURTH.

Of Quantity, Relation, and Quality.

Q. How many accidents are there?

A. Nine—quantity, relation, quality, action, passion, time, site, habit. In this article we shall speak of the first three.

Q. What kind of substance does quantity belong to, and what is its definition?

A. Quantity is a proper accident of corporal substances, because these alone can have it. But, in order to give an adequate definition of it it is necessary to

* This occurs in the mystery of the Eucharist, where the accidents of bread and wine—that is, the color, the taste, the smell, etc.—are upheld, not by the substances of bread and wine, because those two substances have been changed into the substance of the flesh and blood of our Lord, but are supported by Omnipotence.

determine in what its essence consists. Now, in consequence of this accident *quantity*, corporal substances are endowed with the following qualities: 1. *extension*—that is, the possession of distinct parts, one of which is not the other; 2, *occupation* of a certain locality; 3, *impenetrability*—that is, that all these distinct parts cannot be in each other's places at the same time; 4, capacity of being divided, or *divisibility*; 5, capacity of being measured, or *mensurability*. That these qualities belong to corporal substances in force of their quantity is beyond doubt. We ask, therefore, in which of these qualities are we to place the *essence* of quantity? Some have placed it in one, some in another. We hold as follows: The proper office of the essence is to be that first internal and radical principle in a being which gives rise to all its properties. Hence that must be called the essence of quantity which is the root and principle of all its properties. Now, among the five properties of quantity just mentioned, that which is the first internal and radical principle of all others seems to be *extension*. In this, therefore, must we place the essence of quantity. This we prove as follows: It cannot be occupation of space, because this property belongs to the corporal substance, inasmuch as it is made up of parts, and we must conceive the body first as having parts and then as occupying space. It cannot be impenetrability, which also supposes the body first having parts and extension, and afterwards the quality of one part not being able to occupy the space of another at the same time, both being obliged to hold their respective places. Neither can it be divisibility or measurability, for the same reason. Therefore the essence of quantity lies in extension; and, as each thing is to be defined by its specific difference, we

may define quantity *that accident by which corporal substances have extension.*

Quantity may be of two kinds—continual and separate. The first is that the parts of which exist together, but united so as to form one mass or a whole, as a *line*. The separate is that the parts of which are disjointed and divided, as *number*. The continual quantity has three dimensions—length, breadth, and depth. If a continual quantity is considered only in regard to its length, it is called *line*; if it is looked at in reference to its breadth and depth, it is called *surface*; if it is regarded as having all these qualities, it is called *body*.

Finally, quantity may be *finite* and *infinite*. The first is that which has limits; the second is that which is conceived as having no limits.

Q. Can there be a quantity really infinite?

A. We answer negatively as to both quantities, continual and separate. The first cannot be really infinite, because a continual quantity may be either a body, a surface, or a line; but none of these can be really infinite. Therefore continual quantity cannot be infinite. The minor is proved as follows:

1. All bodies have a surface; but, surface is the limit of a body, therefore all bodies are limited, and cannot be actually infinite.

2. The surface is terminated by the line; therefore all surface is limited.

3. All lines are terminated by points; therefore all lines are limited, and consequently all continual quantity is limited.

Separate quantity cannot be infinite, because all that which can become greater or less cannot be infinite. But, supposing a given number, you can always add to or subtract from it a unity, and thus make it

greater or less. Therefore no separate quantity can be infinite.

Q. Can any quantity be potentially infinite?

A. If we speak of separate quantity we must answer, Yes; because to every number we may always add other units. But if we talk of continual quantity, we must make a distinction. When that continual quantity is abstracted from every sensible form that is a mathematical quantity, it may be potentially infinite, because it is not impossible to think of an abstract quantity to which we are continually adding. But if by continual quantity we mean that which actually belongs to bodies in nature, then it is impossible that it should be infinite, because whatever exists in nature has definite, determinate being, and hence the quantity which accompanies it has a definite form also. Therefore in this sense there cannot be a continual quantity even potentially infinite.

Q. Give the definition and elements of relation?

A. Relation is defined: *the order which a thing has with another; or, the how two things lie to each other.* From this definition it is clear that to obtain relation three things are required: 1, the subject, or that which is related; 2, the term, or that to which the subject is related; 3, the principle, or reason why the subject is related to the term. Thus in the relation of paternity the father, who generates, is the subject; the son, who is generated, is the term; the foundation or reason for the relation is generation.

The subject and the term, because the relation runs between them, are called the *extremes*, and oftentimes the terms, of the relation. Now, extremes in every relation must have this proper qualification: that, considered as such—that is, as relatives—they must exist together, both as to their being and as to their

being known; as to their being, because the father could not exist without the son, and *vice versâ*; as to their being known—that is to say, that the knowledge of the one must necessarily carry along with it the knowledge of the other—because, when we consider relative terms as such, the knowledge of one must necessarily imply the knowledge of the other.

Q. Speak of the distinction of relation.

A. In logic we divided relation into real and logic. Here we must add that real relation may be mutual and not mutual. It is called mutual, or strictly real, when the relation is real in both extremes, as in the example above given of paternity and sonship. It is called not mutual when the foundation of the relation is real in one extreme and not in the other, but placed there by our mind. Such is the relation of creation. On the creature's side it is real, because it has placed in it something real; on God's side it is logical, because His creating the universe effected nothing new in His nature.

Q. Do real relations truly exist?

A. Certainly. 1. Because none can doubt that a father is a true father of his son, and *vice versâ*; that two plus two are equal to four; that two red roses are similar in color. But paternity and sonship, equality and similarity are mere relations; therefore there exist true relations.

2. It is certain that there exists in the universe an admirable order of different beings, and none could assert that it is merely a fiction of our fancy, or a pure extrinsic denomination, because in that order and harmony lies the whole good of the universe. But such order is nothing more than a real chain of relations; therefore there exist true relations.

3. We judge of the rights and duties in civil society

by merely considering the relations among individuals; but if the relations between individuals were not real, the rights and duties emanating from them would not be real. Therefore we must admit real relations.

Q. Under how many heads may we bring all these relations?

A. Under three heads. Relation is the order which a thing has with another; therefore there are as many relations as there are ways by which a thing may have order with another. Now, a thing may have order with another (1) inasmuch as it forms one of its essential elements, and both together constitute a genus or a species, as the relation which exists between the human soul and the body. 2. A thing may have order with another as the cause to the effect—as the relation of a father to his child, of an architect to the building, etc. 3. A thing may have order with another in consequence of the agreement or disagreement of both in some accidental quality—as two red roses, two white lilies, etc.

Q. Give the essence and definition of quality.

A. Quality is a name which is given to different things, and also to all the categories of accidents; but, taken as a special category, it is defined: *that accident which modifies and affects the substance in itself.* Upon which definition we observe that it is called accident to distinguish it from the specific difference which also qualifies the substance; but spirituality, for instance, qualifies the substance of the soul, yet it belongs to its essence, and is not an accident. We have added *which modifies and affects the substance*, to distinguish it from other accidents. Because, though all accidents are affections of the substance, and are added to it to supply some

defect or imperfection, yet the quality properly and intrinsically is that which modifies the substance. Quantity, for instance, is given to the substance to give it extension and impenetrability of parts; relations are effects, as it were, of substances. Other accidents might more properly be called adjacent, rather than intrinsic, perfections of the substance; but quality alone is intrinsic to it, as healthy food, fresh air, strong man, charming sky—all qualities inherent to these various substances.

Q. How many kinds of qualities are there?

A. Four: those which modify the substance in itself—as to be well, to be healthy; those which affect it in its operation by adding or diminishing efficacy—as the power of vision in a young person, the weakness of the same in an aged man; those which affect it according to physical movement, inducing some sensible transformation—as *hot* air, *cold* air, *moist* air, etc.; those which affect the form or figure of the substance—as a square table, an oval face, a hooked nose. The first qualities are called *disposition* or *habits*; the second, *power* or *impotence*; the third, *alterations*; the fourth, *form* and *figure*.

The following lines may be taken as an example of the different kinds of qualities:

“ *Queen of fragrance,* lovely †* Rose,
The beauties of thy leaves disclose !
The winter’s past, the tempests fly,
Soft ‡ gales breathe gently through the sky ;
The lark, *sweet* warbling on the wing,
Salutes the *gay* return of spring ;
The *silver* dews, the vernal showers,
Call forth a *bloomy* waste of flowers ;
The *joyous* fields, the *shady* woods,
Are clothed with green or swell with buds ;

* Quality of power.

† Of disposition.

‡ Of power, etc.

Then haste thy beauties to disclose,
Queen of fragrance, lovely Rose !”

—BROOME, *The Rosebud.*

ARTICLE THIRD.

Action and Passion.

Q. What is action, and how many kinds of action are there?

A. In another chapter we have spoken of causes, and especially of the efficient cause, or of the agent, and of the effects which emanate from it. This *emanation from the cause producing the effect is called action.* From this we can understand how, in order to have action, three things are required: 1, a principle which acts—that is, the substance; 2, a principle according to which the action is performed to determine its kind—that is, the essence, which is the interior principle of every action; 3, a principle through which the substances may act—that is, the faculties, which, as we shall show, in creatures are the proximate principle of operations distinct from the essence. Action is of two kinds—immanent and transient. The first is that which terminates in the subject, acting in such a manner that it is itself both the principle and the term of the action. The second is that which terminates outside the subject—that is, the action begins in the subject and terminates outside of it.

Q. What are the opinions of philosophers as to both kinds of action?

A. As to immanent actions, some have said that they are not true actions, inasmuch as they have no real term. Against transient actions, Leibnitz has said that they are impossible, on the plea that in order to have a transient action something must pass from

the agent to the subject acted upon, but this is impossible; therefore, etc. Now, both these opinions are false. 1. As to immanent actions. When I study, for instance, I perform an immanent action, because the term of the action remains in me. But is the result of my action less real because it takes place in myself? Certainly not, since the perfection of my intellect, the consequence of my study, is surely something real—as real as the distinction which exists between a learned and an ignorant man, between a cultivated man and a boor.

“Base-minded they that want intelligence ;
For God himself for wisdom most is praised,
And men to God thereby are highest raised.”

—SPENSER.

With regard to the possibility of transient actions, we deny that it is necessary that an accident should travel from the agent to the subject acted upon to render possible such actions; because all that is necessary in this case is that the agent should apply its efficacy and force upon the subject to produce in it a new state. Secondly, if this possibility were denied, many absurd consequences would follow; for if all those actions which do not terminate in the agent did not exist, man would no longer be responsible for all those actions which pass from him, such as theft, murder, etc.; he would no longer be liable either to reward or punishment; all the order and harmony of the universe, which is kept by one series of beings acting upon another, would be a mere optical delusion.

Q. What is the term of both actions?

A. The direct term must always be something positive, but as to the indirect term it may be negative. In fact, every agent acts always for an end; but the

to be destined to, or to be designated by, that place. Now, this determination which a created spirit receives from place is called *to be in a definitive place*, because place merely defines or designates where the spirit is, but neither contains nor surrounds it.*

Q. What is space?

A. It is very difficult to define space, and philosophers have broached all sorts of opinions about it. On the one hand, space cannot be what our fancy imagines—something really existing as containing an immense number of bodies—because extension cannot exist as something separate from bodies. What could it be but a body? And where could the body be contained? In another? And where would this third one be? In a fourth, and so on *ad infinitum*?

On the other hand, it seems contradictory to suppose that that which contains all bodies is the same thing with that which it contains. If, therefore, space must not be something separate, and at the same time it must be something distinct, from bodies, what else can it be to satisfy both requirements except what St. Thomas defines it to be, *the extension of bodies, inasmuch as it is considered to contain either the same body to which it belongs or other bodies*?

Having thus explained the idea of space, it is hardly necessary to prove it, because if the capacity to contain must be found in a body, what else can it be but its extension and dimension? Therefore it is clear that the nature of space lies in extension. Hence it is that whenever we want to measure space we only measure extension. From this it appears that that space which we imagine to exist outside the limits of the universe,

* The schoolmen called the manner in which a material object is in a place *esse in loco circumscriptive*. The manner in which a spirit is in a place *esse in loco definitive*. We have rendered in the text the idea of the schoolmen as accurately as we could.

and in which we fancy the world to have been created, is not a reality but a fiction, which St. Augustine jestingly calls *spacious nothing*.

But it may be asked: Where is the world? What vast body contains it? The world is nowhere but in itself. It is not contained in any other space or body, but God's infinite power upholds it.

Q. Give the idea of the category *When*.

A. Things may be bounded not only by place, but also by time. Now, as the boundary of bodies proceeding from place gives the category where, so also the determination of things arising from time gives the category *when*.

To understand this we must give the idea of time. Time is a kind of duration by which we mean the permanence of a thing in its existence. Hence duration may be of as many kinds as there are modes of existence. The first is that of the Being absolutely immutable, which is God. The second is that of beings immutable as to their being, but changeable as to their operations. The last is that of being changeable as to both being and operations. According to these three modes of being we may distinguish three kinds of duration. The first is called eternity, the perfect possession of interminable life all in one—that is, having neither beginning nor end nor succession. The second is called *ævum*, which is an interminable life of a being created but naturally imperishable, and belongs to immortal spirits. The third is that of beings mutable as to being and operations. Time, therefore, is nothing more than the *duration of beings mutable as to being and operations*. And because by time we measure the changes and movements of such mutable beings, determining the beginning and the end of such movements, Aristotle has defined

time to be the measure of movement by marking its before and its after.

“ Time past and time to come are not,
Time present is our only lot.”

—MONTGOMERY.

Q. What is the idea of site ?

A. The disposition or location of the parts of a body with regard to a place is called site. From this it might appear that the category site is confounded with that of *where* ; but if we consider both accurately we shall find a great difference between them ; because *where* implies merely that a body is found in such a place, whereas site implies the manner and the how it is found—perpendicularly, horizontally, leaning, or lying, etc. Site, therefore, is *the how* a body is found in a place. Here we may remark that we are accustomed to apply the idea of site to spiritual things ; but this we do metaphorically. Hence God, says St. Thomas, is said to be sitting in consequence of His immutability, to be standing in consequence of His power to repel His enemies.

Q. What is habit ?

A. That determination or distinction, which accrues to bodies from that which clothes them. From this definition we can see, that, in order to have this category, two or more substances are required—one which is clothed, the other which clothes ; that this accident consists in neither of these two substances, but in the contact of both or in the clothing.

Q. Give a résumé of the whole of ontology.

A. We can see now as in a picture the whole series of truths explained in ontology, and how they descend one from another in beautiful order from the idea of being. Setting out from the idea of being, we have

investigated its *nature* universally considered, then we have studied its *elements* and *how* they constitute being, then we have studied its *properties* of unity, truth, goodness, and beauty. We have enquired afterwards into the *causes* of being, and have acquired a clear and distinct conception of them. Finally, we have proceeded to study the *divisions* of being, and have seen that it is divided into ten classes—first, *substance* in its complete and incomplete state, and then the accidents of quantity, quality, relation, action, passion, space, time, site, and habit, and thus we acquired the most general idea applicable to all things. We conclude with the words of the poet, which recapitulate the whole ontology, and especially the two supreme categories—substance and accident.

The poet introduces a sibyl foretelling the fate of the eldest son of Being, which is Substance :

“ Your son, said she, nor can you prevent it,
Shall subject be to many an accident.
O'er all his brethren he shall reign as king,
Yet every one shall make him underling ;
And those that cannot live from him asunder
Ungratefully shall strive to keep him under.
In worth and excellence he shall outgo them ;
Yet, being above them, he shall be below them.
From others he shall stand in need of nothing,
Yet on his brothers shall depend for clothing.
To find a foe it shall not be his hap,
And Peace shall lull him in her flowery lap ;
Yet shall he live in strife, and at his door
Devouring War shall never cease to roar ;
Yet it shall be his natural property
To harbor those that are at enmity.
What power, what force, what mighty spell, if not
Your learnèd hands, can loose this Gordian knot ? ”

—MILTON.

CHAPTER VII.

OF THE USE OF ONTOLOGY.

Q. What do young people think of ontology?

A. That it is a hard, dry study, of no practical use whatever.

Q. Is that so?

A. It is certainly a little dry and hard to understand; but as to its use, it is of the greatest importance to understand anything scientifically, and every science and art is founded upon ontology.

Q. Can you give any example in art and science showing how they are founded on ontology?

A. In art we will take as an example grammar, which is the art of speaking and writing correctly. In the first place, the foundation of the whole grammar is the substantive verb *to be*, which implies real existence. Without it language would not express a reality, but would be merely a construction and arrangement of words having no real meaning whatever. The substantive verb *to be*, therefore, makes our grammar and our speech real and objective. But this substantive verb corresponds to the universal idea of being as described in ontology.

Next come the nouns, which are divided into substantive and adjective. These correspond to the great division of being into substance and accident. The pronouns, personal or indicative, are founded upon the idea of the person or the individual; *I* expressing always a personality, *this* or *that* expressing an individuality.

Next follow the numbers, which are singular, plural—collective and universal. These are founded upon the property of being *unity*, which gives rise to distinction and plurality.

As to the verbs, they are active, passive, and neuter. The active verb, which means to do or to act, is founded upon the idea of cause and action. When the verb expresses an immanent action it is called active intransitive, as I sleep, I think; when it expresses a transient action it is called active transitive, as I strike; the two grand divisions of action.

The passive verb, which means to be acted upon, to suffer, is founded on the idea of passion, the neuter on both.

As to the moods of verbs, they are the infinitive, the indicative, the subjunctive, the potential, and the imperative. For this division there is no real ground, at least so far as the potential and subjunctive are concerned. The subjunctive is merely an elliptical mode of expression, and the potential is made up of two or more verbs, and therefore it cannot, with any propriety, be called an inflection of any of them. This leaves us the indicative, by which simple assertions are made; the imperative, by which commands are given; and the infinitive, which expresses the meaning of the verb in the abstract, as to love, to do, to think. The indicative is founded on the idea of being as asserting something, the imperative on the idea of cause, the infinitive on the idea of action or passion. The tenses, present, past, and future, are founded upon the idea of time.

The adverb is a qualification added to a verb, such as to do well, to do quickly; and is founded on the ideas of quality—as to do ill, justly, wisely; on the idea of quantity—as to work so much, considerably;

of time—as to do it now, then, soon, when; of place—as to write here, hence, there, where.

The preposition is a word connecting two words together so as to indicate the relation which the things or ideas signified by them bear to each other, and, as it is evident, is founded on the idea of relation—as the heavens above us, the enemies of our salvation about us, the regret after sin, friendships among equals, love between brothers, etc.

Finally, the conjunction, which joins words together, is founded also on the idea of relation.

The syntax, which is that part of grammar which teaches how words are to be arranged and connected together, is also founded pre-eminently on ontology, because its fundamental rule is to arrange and connect words in such a manner as to maintain the proper relations of being. For instance, if I should in speaking break that first rule of syntax that a verb agrees with its nominative in number and person, and instead of saying, "*I read, Peter learns,*" I should say, "*I reads, Peter learn,*" I would break the proper relations of being; for if it is I who read I cannot express that relation of being in the nominative and then deny it in the verb; if it is Peter who learns, one person, I cannot contradict that and express in the verb that they are many who learn.

Grammar, therefore, which takes its objective reality from the idea of real being; which finds its ideas of the substantive and adjective nouns in the conception of substance and accidents; which forms its verbs, active, passive, and neuter, on the ideas of cause, action, and passion; its tenses from the idea of time; which takes its ideas of adverbs, prepositions, and conjunctions from the various kinds of accident; which gives rules of syntax from the natural and essential relations

of being—is altogether founded on ontology, and cannot be known scientifically without it.

Q. Show by the example of the natural sciences how they are founded on the ideas we acquire in ontology.

A. The first natural science is physics, the object of which is to study the causes of the phenomena which happen in matter and which do not cause any change in the composition of bodies. A physical phenomenon is any fact which is accomplished or takes place in matter without altering its composition. A body which falls, a sound which is produced, a certain quantity of water which is frozen, are so many phenomena. Now, to enquire into such facts which do not alter the composition of bodies is the object of physics. We say of phenomena which do not alter the composition of bodies, because to enquire into those facts which modify more or less the nature of bodies is the object of chemistry.

It is evident that physics is an application of ontology to a particular object, for the first question which this science puts is, What is matter, or a body?—that is, it studies the *nature* of the object it works upon, and finds out that any limited quantity of matter is a body; that a body is not formed by a continual quantity of matter, but of elements infinitely small, which cannot be physically divided, and are placed in juxtaposition with each other without touching each other, being designedly maintained at a distance by mutual attraction and repulsion, which elements are called atoms, and a group of them molecules. It finds out also that a body may be in different states: the solid state, as stone, metal; the liquid state, as water, oil; the gaseous state, as steam; that the difference of these three states con-

sists in the cohesion of the parts or molecules; in solids the cohesion being so strong as to require a great effort to separate them; in liquids much less effort, as the cohesion is weaker; in gases much less, as the cohesion is the weakest.

Having enquired into the essence and nature of bodies, it passes on to investigate their properties, some of which, because found constantly in all bodies, it calls essential, such as extension, divisibility, impenetrability, elasticity, mobility, inertia; others it finds only in some bodies, and it concludes to be accidental to bodies, such as solidity, fluidity, ductility, porosity, compressibility.

Physics proceeds next to enquire into the causes of these *phenomena*, in order to understand them scientifically. We say phenomena and not bodies, because to enquire into the cause of bodies belongs to cosmology. It discovers that the following are the causes for the phenomena of bodies: attraction, heat, light, magnetism, and electricity. These are called physical agents or forces. After studying these causes the natural philosopher, by observing the constant relations between the phenomenon of a body and its cause, discovers and assigns what are called physical laws, and attains the object and use of this science. For instance, after studying attraction and finding it to be a force inherent in matter by which particles and masses of matter are drawn towards each other, and carefully observing that this force increases in proportion to the quantity of matter which the attracting body contains and in proportion to the diminishing of the distance between the bodies, it establishes the law that the force of attraction in bodies is in proportion to the mass and to the greater or less distance, the attraction increasing as the mass increases and as the distance diminishes.

The student will here carefully remark how ontology, or the general science of being, has guided the natural philosopher to his science; for as ontology enquires into the nature and essence of *being*, so the natural philosopher enquires into the essence and nature of bodies; as the first enquires into the properties of being, so does the second enquire into the properties of bodies; as the first enquires into the causes of being, so does the latter seek into the causes of the phenomena of bodies; as the first investigates the most general division of being, so does the second enquire into the most general division of bodies, which division gives rise to all natural sciences.

Q. Give a brief idea of the different natural sciences.

A. The body may be inorganic, living, and animal. This supreme division of general physics gives rise to a host of natural sciences. When natural science analyzes the inorganic body into its elements and its constituent principles it is called chemistry, which is the science of whatever has relation to the simple or elementary—that is, bodies which invariably present the same characteristics however they may be divided. On the contrary, those bodies which are composite are aggregations of several elements combined in a different way and united by their natural affinities. Now, these bodies present themselves to our observation in different states—the gaseous, the liquid, and the solid. The science which investigates the nature, properties, causes, and action of gases, together with the laws which govern them, is called gasology. That which studies liquids is called hydrology. The science which studies the nature, properties, causes, action, laws of the solids is called mineralogy. With

regard to organic bodies, the science which studies the first organic bodies—that is, the plant—is botany. That which studies the organic life of animal bodies is called zoölogy, which is divided into two sciences—anatomy and physiology; the first is the study of the nature, properties, causes, functions, and use of the elementary parts of the animal body or of the skeleton; the second is the science of the nature, properties, causes, functions, and uses of the organs of the animal body. Medicine, with all its subordinate sciences, is the science of the causes of the alterations produced in the animal organism and of the means of repairing them.

The next grand division of bodies is that which separates them into celestial and terrestrial. The celestial bodies are the object of a particular science called *astronomy*, the object of which is to explain the phenomena and to account for the movements of those huge bodies which gravitate in space. To this another science is allied, called *cosmography*, which teaches the structure, the form, the location, and the relations of the parts which compose the universe.

The terrestrial body is the object of two other sciences, *geography* and *geology*. The first gives the description of the earth, its exterior figure, its division, and all those particulars presented by its surface. The second penetrates into the very bowels of the earth, and seeks to know its interior structure, the different materials of which it is composed, their formation, their relative location, and the different revolutions to which it has been subject.

These divisions arise from considering bodies in their concreteness, but there is another branch of physical science which does not consider them in themselves

and in their elements, but in the abstract as to their quantity, number, or extension.

Arithmetic and *algebra* consider quantity in its highest abstraction, and treat of the combinations of quantities which can be expressed by simple relations of number. But every specified quantity may be regarded from a twofold relation—that of time and of space, because time and space are the necessary conditions of all reality which is capable of measure. The relation of a particular quantity to space expressed by a figure is the object of *geometry*—a science which has received such a name from the use to which it was formerly destined, that of measuring the earth, and which has retained its primitive name, though it has made such immense progress.

The relation which a definite quantity bears to time is expressed by movement, because we may say that it is through movement that time is rendered visible in space. Now, movement cannot be conceived except as the product of a force. The science of the forces which cause movement is called mechanics. These forces may be considered under two aspects, inasmuch as they neutralize each other, and under this aspect they are the object of *statics*; inasmuch as they produce the movement, and then they are the object of *dynamics*. Of course the science of mechanics is subdivided into several branches, according to the nature of the bodies to which the moving forces are applied, such as hydraulics, which considers the movement of fluids; hydrometry, which has for its object the weight, the force, the intensity of fluids, etc.

The student will see by this brief sketch of natural sciences how they are nothing else than an application of ontology; how each studies first the nature of its object, its properties, its causes, and its laws. Onto-

regard to organic bodies, the science which studies the first organic bodies—that is, the plant—is botany. That which studies the organic life of animal bodies is called zoölogy, which is divided into two sciences— anatomy and physiology; the first is the study of the nature, properties, causes, functions, and use of the elementary parts of the animal body or of the skeleton; the second is the science of the nature, properties, causes, functions, and uses of the organs of the animal body. Medicine, with all its subordinate sciences, is the science of the causes of the alterations produced in the animal organism and of the means of repairing them.

The next grand division of bodies is that which separates them into celestial and terrestrial. The celestial bodies are the object of a particular science called *astronomy*, the object of which is to explain the phenomena and to account for the movements of those huge bodies which gravitate in space. To this another science is allied, called *cosmography*, which teaches the structure, the form, the location, and the relations of the parts which compose the universe.

The terrestrial body is the object of two other sciences, *geography* and *geology*. The first gives the description of the earth, its exterior figure, its division, and all those particulars presented by its surface. The second penetrates into the very bowels of the earth, and seeks to know its interior structure, the different materials of which it is composed, their formation, their relative location, and the different revolutions to which it has been subject.

These divisions arise from considering bodies in their concreteness, but there is another branch of physical science which does not consider them in themselves

and in their elements, but in the abstract as to their quantity, number, or extension.

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The student will see by this brief sketch of natural sciences how they are nothing else than an application of ontology; how each studies first the nature of its object, its properties, its causes, and its laws. Onto-

logy, therefore, which teaches the native properties, causes, divisions, laws of being, is of the utmost importance to all sciences which treat of a particular being.

ANTHROPOLOGY

“Know then thyself;
The proper study of mankind is man.”—POPE.

ANTHROPOLOGY.

INTRODUCTION.

Q. What is anthropology?

A. The science which has for its object man. The science which treats of the human soul is called psychology; but as in philosophy we cannot speak of the human soul without mentioning its union with the body, so we must treat of the whole man, and therefore study anthropology, which means the science of man; yet we shall principally occupy ourselves about the soul.

Q. What method shall we follow in speaking of man, and principally of his soul?

A. We shall follow the method of St. Thomas, who says: "In every spiritual substance three things are to be remarked—the essence, the faculties, and the operations." Hence he concludes, with regard to the soul, that three things are to be remarked in it—its essence, its faculties, and its operations. We shall follow this method, and shall enquire into these three things: What is the nature of the human soul? what are its faculties? and what are its operations? This method and order will render the things to be treated clearer and more easy of comprehension.

CHAPTER I.

ON THE NATURE OF MAN IN GENERAL.

ARTICLE FIRST.

That Man is not Body alone, but is made up of another Principle called the Soul.

Q. What is the definition of man?

A. Man is defined to be a *reasonable animal*, because he not only lives and feels but reasons. In calling him an *animal* we determine his proximate genus, in which he agrees with all those beings which have souls. In calling him *reasonable* we define the specific difference of man which distinguishes him from all other animals. Hence man must result from two elements—a body and a reasonable soul—both of which make one substantial whole.

Q. Is this admitted by all?

A. No. In Germany, in England, France, and our own country some would-be philosophers have held that man is nothing more than a well-organized body. But, because there are certain operations in man which seem to suppose another principle in him besides the body, these philosophers, in order to account for such operations, and unwilling to admit a reasonable soul in man, have been forced to invent different systems. Some have said that these operations—such as the act of judgment, of reasoning, and so forth—can be easily accounted for by means of chemical forces and laws. Others, following the principle of Descartes, that whatever happens in the body

is the result of mechanical laws, have held that all the operations of man can be easily explained by means of the laws of movement. Others, finally, seeing that these operations of man cannot be accounted for by means either of chemical or mechanical laws, have invented certain forces which they call *vital*, different from physical properties, but, like these, inherent in the very matter of the organs. To these vital forces they attribute all the distinctive operations of man. The first system has been called *chemicalism*, the other *mechanicism*, and the last *organicism*.

We shall prove first in general that in man, besides the body, there is another principle distinct from the body; that the simplest operations of the mind cannot be explained without this principle. Next we shall say a word on each system in particular.

Proof 1. The human body holds the first and most perfect rank among living bodies. But such a body cannot exist by itself alone, but must have another principle; therefore there must be another principle in man besides his body. The minor is proved: if a body is living, there must necessarily be some principle which gives it life. Now, this principle must be either the body itself or something distinct from the body. But it cannot be the body itself, because, as St. Thomas remarks, it is evident that to be the principle of life does not become the body as body, otherwise all bodies would be living, which is contrary to experience; therefore in living bodies life must arise from a principle other than the body.

2. It is evident that we have ideas or forms of many things in our mind. We have the forms or ideas of the firmament, of the sun, the stars, the sky, the forms of mountains, of the boundless ocean, and so forth. But this would be utterly impossible if in man

there were nothing more than the body ; therefore, etc.

The minor is proved from the principle and the experience that it is impossible for a body to have more than one form at a time. No mechanical or chemical process can make a body take two different forms at the same time. A sculptor, for instance, cannot by any mechanical skill make a block of wood take the form of a man and a serpent at the same time ; a chemist by no chemical skill can make a body take the solid, the liquid, and gaseous forms at the same time. Consequently, if man were nothing more than a body, he could only have the form of one thing at a time ; but man has the ideas or forms of different things at the same time ; therefore there must be in him another principle besides the body.

“ No body can at once two forms admit
 Except the one the other do deface ;
 But in the soul ten thousand forms do sit,
 And none intrudes into her neighbor's place.”*

3. It is a principle of reason as well as experience that a thing which is received into another must take the shape and the form of the recipient. This principle was expressed by the schoolmen as follows : *Omne quod recipitur ad modum recipientis recipitur ;* and by the poet :

“ All things received do such proportions take
 As those things wherein they are received ;
 So little glasses little faces make,
 And narrow webs on narrow frames are weaved.” †

Now, in consequence of this principle, if man were only a body the forms of things which he apprehends

* Davies's Poems.

† Ibid.

should take the form, shape, and size of the body. But this is contrary to experience, because we have ideas of all things conformable to their actual reality; for we are those

“ Wherein are men, beasts, trees, seas, and lands,
And yet each thing a proper place doth find,
And each thing in the due proportion stands.” *

Q. Say something of each system in particular.

A. Having proved that man could not perform the simplest operation of the mind, which is apprehension, if he were only a body, we proceed to make some remarks on each system, and first against those who explain the operations of man by means of chemical forces and the laws of movement. 1. We know by experience that oftentimes we are undecided which operation to choose; we discuss the question with ourselves to see which we should choose; and finally, we know that we choose that which seems to us best, or, in fact, which we wish to choose.

But the freedom of doubting, consulting, and choosing cannot possibly belong to chemical forces, or be done by mechanical laws, for all these acts are done necessarily; therefore all these operations of man cannot be explained by those forces.

2. We know also by experience that after having commenced a certain action we can upon the instant stop it and begin another, and drop it again to undertake a new one. But this would be impossible under the laws of movement and mechanical forces. How often, for instance, would the engineer wish to possess this power of instantly stopping the engine he is guiding, and cannot under the laws of movement, but must let it go on to carry death and desolation to hundreds!

* Davies.

Finally, we remark against the third system that to have recourse to vital properties to explain the operations of man is only confounding the question more and more, because a property is not a principle, but the consequence of some vital principle; therefore that from which property originates, and not property itself, must be the principle of life. But these philosophers contend that these properties are properties of organic bodies; they come to admit, then, that, after all, the body is the principle of life. But we have shown, with the clearest evidence, that a body cannot be the principle of life; therefore we must admit another principle in man besides the body. This is called the *soul*, which, as far as we have described it, may be defined as *the first principle of life in things to which we attribute life.*

ARTICLE SECOND.

This Principle called the Soul is One, but does not Form the Whole Man.

Q. Is the soul a single principle or multiple?

A. Some philosophers, having admitted in man, besides the body, another principle which causes him to move and to act, and having examined these operations and found them different in nature, have come to the conclusion that the principle which causes man to perform all these operations must be more than one. Some have admitted a double principle—one which performs intellectual operations, another which feels and vegetates. Others have admitted three—one the principle of intellectual operations, another the principle of sensation, the last the principle of vegetation. But these opinions are false, and we must admit only one

principle of all these operations and prove it as follows:

1. Because we know by experience that an operation of the soul, when it is too intensely attended to, hinders other operations. For instance, when a man is absorbed in an intense intellectual work the operations of the sensitive and vegetative life are either suspended or imperfectly carried on; and, contrariwise, when a man is plunged into some sensible operation he is unfit for intellectual work. This principle explains all those anecdotes of absent-minded persons, of which we have so many examples.* Now, this would be impossible if the principles of action in man were multiple, because in that case each one would attend to its own department without any trouble or hindrance—one could attend to thought, another to sensation, and another to vegetation and locomotion; therefore there must be one principle in man.

The common sense of mankind rejects such an opinion of more than one principle, because all men in speaking not only say, I understand, but also, I feel, I live, I move, I grow, and such like expressions, attributing all these different operations to one subject, the *me*. Now, this they could not do if they were not conscious that the principle of all these operations is the same and identical; therefore we must admit one principle in man.

“ And these three powers † three sorts of men do make ;
For some, like plants, their veins do only fill ;
And some, like beasts, their senses' pleasure take ;
And some, like angels, do contemplate still.

* That, for instance, of the man who, passing by a toll-gate, cried out to the keeper, “ What's to pay?” The man at the gate replied, “ For what ?” “ How for what ?” replied the traveller ; “ for my horse.” “ What horse ?” rejoined the keeper. Whereupon the traveller, looking at his legs, exclaimed : “ Excuse me, I thought I was on horseback.”

† Intellectual, sensitive, and vegetative.

Therefore the fables turned some men to flowers,
 And others did with brutish forms invest,
 And did of others make celestial powers,
 Like angels, which still travel, yet still rest.
 Yet these three powers are not three souls but *one*,
 As one and two are both contained in three,
 Three being one number by itself alone—
 A shadow of the Blessed Trinity.”

—DAVIES.

But as some of the operations which man performs cannot be accounted for by the soul alone, but require the body also, such as sensation, so we must admit that man consists of a body and a soul united together.

ARTICLE THIRD.

Man results from the Substantial Union of Body and Soul.

Q. Is this union between the body and soul of man accidental or substantial?

A. Plato, who held that the soul is the whole man, and who could not deny that there is a certain union between the soul and the body, contended that this union was merely accidental and exterior—the same union, for instance, which exists between our bodies and the clothes we put on, between the engineer and the locomotive which he runs, or between the pilot and his ship.

The true opinion is that the union between the soul and the body is intrinsic and substantial.

Q. What do you mean by substantial union?

A. To explain this we must recall some points of ontology. 1. Subsistence is that last complement of a substance by which it obtains the mastery over itself and its own acts, becomes responsible for its

actions, and is incommunicable to all others. This is called a complete substance or suppositum.

2. Every substance existing in nature is a suppositum.

3. The subsistence of a created substance is necessary only in this sense: that no substance can possibly exist without a subsistence. But it is not necessary in the sense that every substance should have a subsistence of its own nature and species, because it may happen to subsist of the subsistence of another.

4. This happens when a substance is intended to form such an intimate union with another substance of a superior nature as both to form a complete subject and individual. Because in this case, as nature intends to form of two substances one complete individual, it is evident that both substances cannot be each one an entity perfectly complete, having the mastery and attribution of its own acts, and exclusive and incommunicable; because in that case there would be two perfect individuals, which is against the supposition, as we are speaking of a case where nature intends to form one individual of two substances.

5. We understand also in this case which of the two substances would have to yield its own subsistence. It must be the substance of the superior nature—that is, the inferior nature must have no last complement of its own, but must be completed by the last complement of the superior nature; so that the superior nature's subsistence is that which completes both and forms the individual. This is called substantial union, which may be defined: the union of two substances both made to subsist by a single subsistence, that of one of the substances united.

The substantial union of the body and the soul in man means that, so long as the body is actually united

to the soul, it has no subsistence of its own, but subsists on the substance of the soul; that the soul gives its own complement to the body, and has the ownership of both, and of the acts of both, is responsible for them, and is exclusive and incommunicable to all others.

The proof of this truth lies in the fact that man is considered by all as one individual. We do not say the hand of Raphael painted that Madonna, the hand of Apelles made that statue, the hand of Homer wrote the *Iliad* and the hand of Pope translated it, but Raphael made that Madonna, Apelles made that statue, Homer wrote the *Iliad* and Pope translated it; because, although these actions were done immediately by their hands, guided by their mind, which conceived their masterpieces, yet the actions of either are and must be attributed to one individuality, because both the body and the soul of those geniuses subsisted in one subsistence, that of the highest principle in them—the soul.

We conclude, therefore, with the poet:

“Then dwelleth she not therein as in a tent,
 Nor as a pilot in his ship doth sit,
 Nor as the spider in his web is pent,
 Nor as the wax retains the print in it,”

but is substantially united to the body, inasmuch as it causes it to subsist of its own subsistence, so that both form one individuality and one person.

ARTICLE FOURTH.

Of Man's Essence.

Q. What is man's essence?

A. The essence of man consists in those elements which are absolutely necessary actually to constitute

man. But for this three things are necessary : an intelligent soul, a body, and a substantial union between them in the sense just explained. By these three constituents of his essence is man distinguished from all other animals, to which he seems to bear a certain likeness. Inasmuch as he has a body he is like to animals, but is distinguished from them inasmuch as he is endowed with a rational soul. Again, inasmuch as he is a rational substance he agrees with all intelligent substances, and differs from them in consequence of his possessing a body ; hence by his essence man is placed as a link between the pure, intelligent substances and the sensitive substances, thus binding together the chain of beings which the Creator has made.

“ How poor, how rich, how abject, how august,
How complicate, how wonderful is man !
How passing wonder He who made him such !
Who centred in our make such *strange extremes*,
From different natures marvellously mixt,
Connection exquisite of distant worlds !
Distinguished link in being’s endless chain !
Midway from nothing to the Deity !
A beam ethereal, sully’d, and absorpt !
Tho’ sully’d and dishonored, still divine !
Dim miniature of greatness absolute !
An heir of glory ! a frail child of dust !
Helpless immortal ! insect infinite !
A worm ! a god ! ”

—YOUNG.

It is clear from all we have said that the genetic definition of man may be the following: *An individuality resulting from two substances, a body and a rational soul.*

We say genetic, because this definition gives the genesis according to which man is formed, yet we shall retain the more common definition, that of rational animal.

CHAPTER II.

ON THE PRINCIPLES FROM WHICH THE NATURE OF MAN RESULTS—SOUL AND BODY—AND, FIRST, OF THE SOUL.

ARTICLE FIRST.

The Soul is not a Material but a Simple Being.

Q. How shall we proceed in the knowledge of the soul?

A. Having seen that there are two principles which form man, and beginning to treat of the soul as the principal part of man, we must remark that we are so made by nature that, when we cannot perceive things directly in themselves, we endeavor to become acquainted with them by removing things from them and by comparing them with other objects—that is to say, by investigating which things agree with those we want to know and which things do not. Now, it is certain that the soul is in the body, and that it is distinct from it, and yet we cannot perceive it directly in itself and know that it is there, in consequence of observing certain operations which the body could not perform; therefore the most natural method of coming to the knowledge of the soul, as we cannot perceive it in itself, is to remove from it certain things which cannot possibly agree with its operations.

The first of these things which cannot agree with the operations of the soul is materiality; hence we must say that it is simple.

Q. What do you mean by *material*, *simple*, and *spiritual*?

A. *Material* is that which is composed of parts

which are divisible, as bodies. *Simple* is that which has no parts, and which is incapable of separation, division, increase, or diminution. If a being not only does not result from parts, but is independent of the body for its specific and distinctive operations, then it is called *spiritual*.

Before proving that the soul is not material, we must remark that although we have proved it to be distinct from the body, yet this question must not be confounded with the present, which enquires whether this principle is of the same nature as the body, since some philosophers have admitted that the soul, though a distinct principle from the body, is yet of the same nature as the body. Democritus and Leucippus contended that it is a little globe of fire. The Pythagoreans held that it is formed from atoms floating in the air, and which, differently united, take different shapes. The materialists are those who maintain that the soul is composed of parts.

Q. Show the simplicity of the soul.

A. The soul perceives, judges, reasons, and has the consciousness of itself and of its acts. But these operations would be impossible if the soul were material.

Therefore the soul is not material but simple. The major is admitted by all; the minor must be proved. And, first, the soul could not perceive if it were material. Because all things which may be perceived are either corporal or simple substances. But if the soul were material it could perceive neither; therefore if the soul were material it could not perceive at all. It could not perceive material substances; because if it could perceive them, being itself material, two suppositions could be made, either that each part of the soul perceives each part of the object appre-

hended, or that each part of the soul perceives it whole and entire. If the first supposition is admitted we could never have an entire perception of the object. But we do have entire perceptions of objects; therefore the first supposition is inadmissible. The second supposition cannot be made, because in that case we would have as many entire perceptions of the object as there would be parts of the soul, the same as a glass broken in a hundred fragments; each fragment represents the same object whole and entire. But this is contrary to experience, as we are conscious that we have only one entire perception of each object we apprehend. Therefore, if the soul were material, it could not perceive material substances.

It could not perceive simple substances, because a material thing, being composed of parts, could not perceive that which is indivisible, except the latter could be cut up into parts. But this is impossible, as that which is naturally indivisible cannot be divided without changing its nature; therefore, if the soul were material, it could not apprehend simple substances.

2. If the soul were material it could not form judgments. 1. Because judgment is made up of perceptions and ideas. But we have shown that if the soul were material it could not perceive at all; therefore it could not form judgments.

2. Judgment requires that two ideas, that of the subject and the predicate, should be compared together, put face to face, to discover whether they agree or disagree.

But this comparison would be impossible if the soul were material.

Therefore, if the soul were material, it could not judge.

The minor is proved from the principle that a com-

parison between two things cannot be made unless both things exist simultaneously in the same subject, else how could the subject compare the two together, put them face to face, if both did not exist in it at the same time? But if the substance forming the subject were material and composed of parts, the idea of the subject and the predicate could not be found in the same subject, but one part would perceive one term, the other the second term. Therefore, if the soul were material, it could not judge.

3. It could not reason, because in reasoning it is necessary that the same subject which perceives the premises should draw the conclusion. But the same subject could not be had in a material substance, as we have proved; therefore, if the soul were material, it could not reason.

4. It could not have consciousness of itself and its acts, because consciousness is a reflex operation and takes place when the soul turns in upon itself to investigate its own actions. But matter, which has one part outside the other, could not return upon itself; therefore, if the soul were material, it could not have the consciousness of itself and its actions.

Second Demonstration.

If the soul were corporal, all its operations would be so many movements, because all the operations of bodies can be reduced to movement. But the operations of the soul cannot be explained by means of movement; therefore the soul is not material.

That the operations of the soul cannot be explained by means of movement is clear: 1. Because no body by means of motion moves itself, but must be moved by another; but the soul moves and determines itself, as we know by experience. 2. Because the acts of

thinking and of knowing are immanent and terminate in the soul, whereas movement is a transient act, passing from one body into another ; therefore the act of knowing is not movement.

3. The power of movement in material substances becomes by use weaker and weaker until it ceases altogether ; whereas the intellectual faculties are perfected more and more by exercise.

“ If *she* the body's nature did partake,
Her strength would with the body's strength decay ;
But when the body's strong sinews slake
The soul is most active, quick, and gay.”

—DAVIES.

4. The soul can perceive contrary things at the same time, so much so that by means of the knowledge of one it comes to know the other. For instance, we acquire the idea of eternity by the ideas of time and of succession, the idea of the most perfect by that which is imperfect, the idea of the absolute by the idea of the contingent, etc.

But the same parts of the body cannot receive contrary movements ; therefore the operations of the soul cannot be explained by movement.

Q. What answer would you give to a materialist who should object to this doctrine thus : The soul is in the body, but there can be nothing in the body except a material thing ; therefore the soul is material ?

A. The soul is in the body as *a body*, each part of which touches the corresponding parts of the body, just as putting one hand against the other, or as filling a pitcher with water, we deny ; because if the soul were in the body in this manner it would be material. The soul is in the body inasmuch as it acts in and upon it, we grant ; and this is the manner accord-

ing to which immaterial things are in space and matter.

Second Objection.

The soul is subject to the same vicissitudes as the body, and the faculty of intelligence is developed in man according to the age, sex, temperament, and disposition of the individual; therefore it is clear that the soul must be of the same nature as the body.

A. As we shall see by and by, in consequence of the union between the body and the soul the latter must depend upon the body as the instrument which furnishes the materials for its operations. Therefore, if the body is tiny and weak, old and faulty, the instrument also which furnishes the materials for the soul's operation is tiny, weak, old, and faulty; and hence the operations of the soul cannot be performed at all, or performed imperfectly, not because the soul is the same as the body or of the same nature, but because the body in those conditions cannot furnish the proper materials to the soul. Deprive Raphael, for instance, of canvas and pencil and colors, or give him the worst canvas and pencil and colors you could find, and, no matter how grand his conceptions might be in his mind, he could not carry them out or express them. Likewise, great as the native power of intelligence may be, yet, if to come from the power to the act, it needs materials administered to it by the body; if the body is in such a state as to be unable to furnish those materials, the power will remain power and never come to the act, not for want of native force or because it is of a material nature, but because the material is wanting in consequence of the want in the instrument.

“ These imperfections, then, we must impute
 Not to the agent but to the instrument ;
 We must not blame Apollo, but his lute,
 If false accords from false strings be sent.
 The soul in all hath one intelligence,
 Though too much moisture in an infant’s brain,
 And too much dryness in an old man’s sense,
 Cannot the prints of outward things retain.
 Then doth the soul want work and idle sit :
 And this we childness and dotage call ,
 Yet hath she then a quiet and active wit,
 If she had stuff and tools to work withal.”

—DAVIES.

ARTICLE THIRD.

On the Spirituality of the Soul.

Q. If the soul is not material, can you say, at least, that it depends on the body for its being and its specific operations ?

A. No ; but we must hold that the human soul has a subsistence of its own independent of the body, and, therefore, is spiritual. Proof :

1. That which acts by itself subsists by itself. But the soul has operations which it performs independently of the body--the operation of intelligence ; therefore the soul subsists by itself. The minor is proven, because, from the objects perceived, it is certain that the soul can understand the nature of all bodies. But if the soul were a body, and used bodily organs, it could not perform such operations ; therefore in these operations the soul does not depend upon the body. In fact, as St. Thomas remarks, that subject which can know something must not contain in its nature any element of those things it wants to know, otherwise that element which would naturally be found in it would hinder the knowledge of other

things, as we see in the tongues of sick people, covered with bitter coating: they cannot taste anything sweet, but everything tastes bitter. If, therefore, the intellectual principle had the nature of a body it could not know the nature of all bodies.

Again, how can she several bodies know
If in herself a body's form she bear?
How can a mirror sundry faces show,
* If from all shapes and forms it be not clear?
Nor could we by our eyes all colors learn,
Except our eyes were of all colors void;
Nor sundry tastes can any tongue discern
Which is with gross and bitter humors cloy'd."

—DAVIES.

2. If our souls were not independent of the body in their operations they could not have universal perceptions. But they do have universal perceptions; therefore they do not depend upon the body for their operations. The major is proven: That which is received into any recipient must take the form of the recipient. But matter is contracted and particular; therefore whatever is received in it must take a contracted and particular form. If, therefore, the soul depended upon matter for its operation, all the forms it could take would be contracted and particular.

3. The will has a tendency after intellectual and incorporeal good, and is not confined to this or that particular good, but is drawn towards good in general or to whatever object in which it can see an element or feature of goodness. But if the soul depended upon the organs of the body for its operations, this would be impossible, because bodily organs always tend toward some individual object, and never toward general and abstract objects; therefore the soul is independent of the bodily organs in its operations.

4. We oftentimes are conscious of a hard struggle going on between the body and the soul, and observe that when it wishes the soul can repress, and does in fact repress, the movements of the body. Now, this is a clear sign that the soul can act independently of the body; therefore the soul is spiritual.

Q. What remarks are to be made upon what has been said?

A. 1. That opinion of Locke, Hume, Condillac, which holds that a soul is not a substance by itself, but an aggregate of modifications, is false; because we have proved that the soul is a substance, as it has a subsistence of its own independent of the body.

2. That the opinion of Locke, who doubted whether it would not be possible for matter to think, is absurd, because to know and to understand is the act of an immaterial subject exclusively; consequently, not even God Almighty, as Locke thought, can cause matter to think, because God cannot effect a contradiction.

3. The human soul has an existence independent of the body; but it has also sensitive faculties. Now, as these stand in need of the body to perform their functions, it follows that the soul in man, inasmuch as it is sensitive, is dependent upon the body in the sense that it must be united to corporal organs and stands in need of them to experience sensibility.

“Mysterious thought, swift angel of the mind!
 By space unbounded, though to space confin'd,
 How dost thou glow with just disdain, how scorn
 That thought could ever think thee earthly born!
 Thou who canst distance motion in thy flight,
 Wing with aspiring plume the wondrous height,
 Swifter than light outspeed the flame of day,
 Pierce through dark profound and shame the darting ray,
 Throughout the universal systems range,
 New form old systems, and new systems change;

Through nature traffic on, from pole to pole,
And stamp new worlds on thy dilated soul ;
(By time unlimited, unbounded by space,)
Sure demonstration of thy heavenly race ;
Deriv'd from that which is derived from none,
Which ever *is* but of Himself alone."

—BROOKE, *Universal Beauty*.

ARTICLE THIRD.

How the Human Soul Originates.

Q. How does man's soul originate ?

A. The soul being a spiritual substance, entirely different from the body, we may ask, How does it originate? Is it produced in the same manner as the body, and by the same principles?

There have been several answers to this question. Omitting that of the Emanatists, who held that the soul emanated from the divine substance, as we shall refute this opinion when speaking against pantheism, we mention the opinion of the Traducians and that of some Catholic philosophers. The Traducians maintained that the soul of a child is transmitted to him from the body of the parents; and others, from the soul. Rosmini holds that the soul of a child, inasmuch as it is a sensitive substance, is transmitted by generation, and that it becomes afterward rational and intellectual by the apparition of the idea of *being* which God exhibits before it. Now, all these opinions are false.

The first is false because bodies cannot give that which they have not—a thing transcending their nature. But such would be the case if souls were transmitted from the parents' bodies, because souls are spiritual, the body is material. The body, therefore, would give that which it has not—that which transcends its own nature and power. It would produce

an effect inferior to its cause ; therefore it is absurd to hold that souls could be transmitted from the body.

The second opinion, which holds that souls are transmitted from the parents' soul, is also false.

1. Because the parents' souls are spiritual ; but a spiritual substance cannot generate—that is, be divided and corrupted—as it has no parts ; therefore, etc.

2. If we do not admit that they are generated from the parents' souls as parts detached from them, we can make two suppositions : They must either be created from nothing by the parents' soul (an opinion which has been recently broached by Dr. Frohschammer), or we must say that the soul of the parent must draw them out from some existing matter. But neither supposition is possible. Not the first, because creation from nothing belongs to God alone :

“ For all things made are either made of naught
Or made of stuff that ready-made doth stand ;
Of naught no creature ever formèd aught,
For that is proper to the Almighty hand.”

The second supposition cannot be admitted, because forms drawn out from matter are always depending upon it and accidental, not self-subsisting, as the soul.

The opinion of Rosmini is also false, because, 1. It is impossible that the sensitive soul should be derived from the parents' by way of generation. The nature of the human soul is one intellectual, sensitive, and vegetative. But it is proper to every being to be produced in the same manner as its being becomes it ; therefore for one being it is becoming to be produced by one agent, especially when this one being is simple and cannot be divided into parts nor produced successively—that is, first one part and then another ; therefore the same principle which produces the intelligent must produce the sensitive and vegetative soul.

2. Either the sensitive soul, which becomes rational by the apparition of being, is destroyed when it becomes rational or it is not destroyed. If it is destroyed, then God creates a new soul; if it is not destroyed, then we may enquire How is it that it becomes, along with the rational soul, one simple and spiritual being? Does it change its essence? In fact, it changes and it does not change its essence. It changes, inasmuch as the sensitive soul in the supposition would have another essence and would belong to another species; it does not change it, inasmuch as the sensitive soul would not be destroyed. In that case it would and would not be. But this is a contradiction; therefore the opinion of Rosmini is false.

Having excluded all possible suppositions which might be supposed to account for the origin of the soul, we must conclude that it is created by God.

“Then if her heavenly form do not agree
With any matter which the world contains,
Then she of nothing must created be;
And to create to God alone pertains.”

—DAVIES.

Objection: If the parent were not the originator of both body and soul, he could not be said to be the father of the child, but only the father of the body of the child.

In answering we distinguish: If the soul were not united to the body at the moment of generation—a union which causes the action of the father to terminate in a human person—it is granted; otherwise it is denied. If the father generated the body of the child first, and this existed by itself as a distinct individuality for some time, then the objection would stand; but the case is otherwise. At the same moment that the father generates, at that very same in-

stant what is being generated is united substantially to a spiritual soul created by God, so that what the father generates is not an individuality apart from the soul, but *is* an individuality, because the soul makes it subsist of its own subsistence. Therefore the objection does not stand, because the father's action terminates in one individuality and personality by the union with the soul, and therefore must he be called the father of the child and not of his body.

ARTICLE FOURTH.

When does the Soul Begin to be ?

Q. What are the opinions of philosophers as to the time when the soul takes its origin ?

A. Pythagoras and Plato maintained that human souls, before they were united to a body, lived a better life in the stars, and that they would be there still were it not that some of them became guilty of a grave crime, and were in consequence cast away from heaven and condemned to be enclosed in the body as in a dark dungeon, with the additional penalty of losing all remembrance of their former state.

Leibnitz held that all the souls of men who were to be born were created by God since the beginning of the world and were enclosed in so many tiny bodies, which were the germs of their own bodies contained in Adam, which germs, evolving in the course of time and acquiring the proper size, constitute men's bodies.

Q. What are we to think of these opinions ?

A. That both are false. As to the first, it is evident that according to this opinion the union of the soul and body would be against nature. Now, this is false, because the union of the soul and body is intended by nature as the object of generation. But

what is intended as the object of a natural action cannot be unnatural; therefore the union of the soul and body must be natural.

2. It follows from this opinion that the union of the soul and body is accidental; but we have shown that it is a substantial union.

3. As there are no proofs alleged in confirmation of this opinion as to the pre-existence of soul, since, according to these philosophers, we have lost all memory of such a state, we have reason to reject it as a fiction or dream.

Against the second opinion we observe :

1. The animal is said to be engendered when the soul is united to the body, but, according to the opinion of Leibnitz, this could not be in the case of man, because the animal in his case would already exist; therefore in this case we cannot say that the animal is generated.

2. The principle of sufficient reason has a great weight with Leibnitz, but no sufficient reason can be produced why the soul of men should be created before man's generation—there is no sufficient reason why the soul should exist without action for so long a time; therefore the opinion of Leibnitz is false.

3. We observe also that it is a mere hypothesis, without any foundation in reality.

Q. What is the true opinion?

A. That the soul is created by God at *the moment* when the matter which is to form the body is fit to receive it. But there are two opinions about this precise moment. Some, like the ancients, have said that that moment means when the body is fully organized, which they suppose to be forty days after the conception for males and eighty days for females.

Others—and this opinion is held by all modern phy-

siologists and metaphysicians—say that that moment is when the germ administered by the female is fecundated by the male.

The reasons for this opinion are most convincing: 1. It is impossible that the matter administered by the female and fecundated by the male could begin to be organized without an interior living principle. “*Opera enim vitæ non possunt esse a principio extrin-sico sicut sentiri, nutriri et auferri*” (St. Thomas, qu. cxviii. art. 2). The acts of life, such as to feel, to be nourished, and to grow, cannot originate in an extrinsic principle. Therefore, in order to obtain the process of organization, we may admit a twofold hypothesis, either that the soul is there at the moment of the conception to begin as the interior principle the process of organization, or that another internal principle effects this process and makes way for the soul when the organization is completed. But the second hypothesis is absurd; therefore the soul is there at the moment of the conception. 2. If the soul were united to the body at any other moment than that of the fecundation, then the parents could not be called the generators of a human person, but only of a body destined to be united to a soul and to form a person after the union, because it is evident that the generative action of the parents would not terminate in a human person so long as the soul is not there contemporaneously with the action. But this is against the common sense of mankind, who feel and hold firmly that the parents of a man are the parents of his personality and not of his body only; therefore, etc.

ARTICLE FIFTH.

On the Immortality of the Soul.

Q. What remarks ought to be made before proving the immortality of the soul?

A. The following: 1. That a living being which has no end to its duration is called *immortal*, and this property *immortality*.

2. Immortality may become a living being either essentially or naturally or by grace. It becomes essentially only that being who exists by necessity of his nature, and whose existence is identical with his essence, so that his non-existence would be a contradiction. This being is God. It becomes naturally that being which, though not existing by necessity of nature, is yet so constituted that it cannot cease to be except by annihilation effected by almighty power. It becomes by grace that being which God by His own grace maintains in existence, though naturally prone to dissolution.

The second manner of immortality becomes the soul. To demonstrate, therefore, the immortality of the soul we have to show three things: 1, that it is naturally indestructible; 2, that it continues to act even after its separation from the body; 3, that it cannot be annihilated by any external cause.

As to the first, a thing may be intrinsically destroyed for two reasons—either because it is composed of parts distinct from each other, which, once disconnected and separated, the thing perishes; or because, though not composed of parts, it may depend like the accident on something else, which being destroyed, it is itself destroyed.

But the human soul is neither of these things: therefore it is intrinsically indestructible.

The minor has to prove that the human soul is not composed of parts and that it is not an accident.

1. That which is simple is not composed of parts; but the soul is simple, therefore it is not composed of parts.

2. That which subsists of itself is not an accident dependent upon any other object in order to exist. But the soul subsists in itself.

Therefore it is not an accident dependent upon the body in order to exist.

As to the second, that the soul separated from the body continues to act :

Operation is the action of a substance.

But the soul is a substance, and continues to exist after the body has been destroyed.

Therefore the soul, after the dissolution of the body, continues to act.

But action follows the nature of a being.*

Therefore the soul continues the actions, after the dissolution of the body, agreeably to its nature as a rational substance, which are acts of intelligence and will.

“ But (as the body living) wit and will
 Can judge and choose without the body's aid,
 Though on such objects they are working still
 As through the body's organs are convey'd,
 So when the body serves her turn no more,
 And all her senses are extinct and gone,
 She can discourse of what she learned before,
 In heavenly contemplation all alone.”

—DAVIES.

Thirdly, we have to prove that the soul is extrinsically immortal—that there is no exterior cause which may destroy it.

* *Operatio sequitur esse.*

The extrinsic cause which might annihilate the soul may be either a creature or God.

But the creature cannot, and God will not, annihilate the soul.

Therefore no exterior cause can destroy the soul.

The first part of the minor is clear.

The destructive force of a creature is of a piece with its productive force.

But the creature cannot produce anything out of nothing; therefore it cannot reduce anything to nothing.

That God will not annihilate the soul is also evident; for if we regard the power of God in itself, without reference to His other attributes, God could annihilate souls as well as other creatures, because a finite being is in itself indifferent to be and not to be, and that which fixes it in being is the creative act of God, and it continues to exist as long as the creative act continues to determine it to existence. If that act were withdrawn the creature would immediately cease to exist.

But looking at the power of God in relation to His other attributes, we deny that He could annihilate the soul.

Proof: To annihilate the soul would be contrary to His providence, wisdom, goodness, and justice; but God cannot do anything contrary to these attributes, therefore God cannot annihilate the soul.

Proofs of the major: 1. It is contrary to providence and wisdom. It behooves the providence and wisdom of God not to destroy those natural qualities which He Himself has given to beings, nor deprive essences of those properties which become them. But immortality becomes the soul and all other spiritual substances;

therefore to annihilate the soul would be against the wisdom and providence of God.

It would be contrary to His goodness.

We have an imperative, ardent, continual desire after happiness—a desire which cannot be said to be found only in this or that man, at this or that time, in this or that place, but is found in all men, at all times, and in all places. This desire, therefore, being so universal in time and space, must be said to have been implanted in man's nature by the Creator's hand, because whatever is universal in all times and places is natural and must come from nature's Author.

But this craving after happiness could not be satisfied without the soul's immortality; it behooves, therefore, God's goodness to keep the soul immortal.

That the craving after happiness could not be satisfied without immortality is proved from two reasons: 1. Because happiness is the *perfect fulness of interminable life*, and if one could entertain the thought for a moment that this fulness of life could after certain time cease even for a day, the joy resulting from that exuberant overflow and fulness of life would be marred and be overcome by the unutterable pain of having to lose it, and thus it would cease to be happiness.

2. We have an imperative, insatiable craving after truth and perfection.

“ Dive into the bottom of the soul, the base
Sustaining all; what find we? Knowledge and love.
As light and heat essential to the *sun*,
These to the soul; and why, if souls expire?”

—YOUNG.

But if the soul is not immortal this craving could not be satisfied, as nothing in this world can appease

it. One thing can fill up that void, and one thing only: it is the contemplation of infinite truth, of immense beauty, and the possession of infinite and most enticing loveliness—that is, the vision and the possession of God.

“ How little lovely here ! How little known !
Small knowledge we dig up with endless toil,
And love unfeigned may purchase perfect hate ;
Why starved on earth our angel appetites
While brutal are indulged their fulsome fill ?
Were their capacities divine conferred,
As mock diadem in savage sport ?
Rank insult of our pompous *poverty*,
Which reaps but pain from seeming claims so fair ?
In future ages lies no redress ? And shuts
Eternity the door on our complaint ?
This cannot be. To *love* and *know* in man
Is boundless appetite and boundless power,
And these demonstrate boundless powers, too.
Objects, power, appetites—Heaven suits all.”

—YOUNG.

It is contrary to justice.

It is an established fact that on earth there are good and wicked men ; it is also certain that Divine justice must give a fitting reward to virtue and due punishment to vice. But we do not observe this just and equitable distribution of rewards and punishments, because too often we see the wicked prosper and enjoy the fruits of their iniquities, whilst frequently we see the just oppressed and down-trodden by the wicked. There must be, therefore, another life after the body is dissolved, where the accounts will be balanced, where the rewards and punishments will be distributed equitably according to the good and evil which men have done. But if the soul were not immortal this future life would be impossible ; therefore it behoves the justice of God to keep the soul immortal.

It will not do to say that a fitting reward of the just is the peace and tranquillity of conscience and the satisfaction and pleasure which accompany the doing of good, and, on the contrary, that the fitting punishment of vice is the remorse of conscience which follows crime; because this reward and punishment would be reduced to very small proportions. Besides, we know by experience that the more the wicked man plunges into vice the less he feels the pangs of conscience, and we know also that it is not always true that the just feels peace and tranquillity; he is too often agitated by doubts, perplexities, and scruples suggested to his mind by his over-delicate conscience, and is tossed to and fro by a variety of conflicting emotions, so as to feel very little peace. In this case where would his reward be? And when the just has to suffer death for the sake of his principles, what would then be his reward? It is clear, therefore, that the pleasure of doing good is not a fitting reward of virtue, nor the remorse of conscience a proportionate doom for vice.

“ The soul, of origin divine,
 God’s glorious image freed from clay,
 In heaven’s eternal sphere shall shine,
 A star of day.

“ The sun is but a spark of fire,
 A transient meteor in the sky ;
 The soul, immortal as its sire,
 Shall never die.”

—MONTGOMERY.

Q. Give the definition of the soul.

A. We may define the soul in general to be that first principle of life in those things which by experience we know to be living. To illustrate this definition we must remark first that of bodies some are living and some are not living. Those are called *living* which move

themselves in force of an interior principle ; *not living* are those which are moved by an exterior principle. Now, this principle of life interior to living bodies is called by a general name, *soul*. But not every principle of life may be called soul, because, though some other part of the body may be a principle of life, such as the heart in man, yet that part would not be called soul. The soul must be the *first* principle of life. We have said, finally, in *those things which we know by experience to live*, because God also lives ; spiritual substances entirely separated from matter live, yet they are not called souls, because we do not know them by experience. From the definition of soul in general we may frame the definition of the human soul. If the soul be the first principle of life, it is clear that this life is different in different animals in proportion as life is manifested in them. But in man all kinds of life are manifested, vegetative, sensitive, and intellectual ; therefore the human soul must be the principle of these three kinds of life, and may be defined *that first principle by which man vegetates, feels, and reasons*. Or it may be defined in the words of St. Augustine, which amount to the same : “ A certain substance endowed with reason and fit to govern a body.” * It is called substance to show that it is not an aggregate of qualities or modifications ; *endowed with reason*, by which it is to be understood that it is *simple, spiritual, ingenerable, incorruptible, and immortal* ; *fit to govern a body*, because the human soul is destined to form a whole with the body which it animates.

* “Substantia quædam rationis particeps regendo corpori accommodata.”—*De Quantitate Animæ*, ch. iii. n. 22.

CHAPTER III.

OF THE HUMAN BODY.

Q. How must we treat of the body in philosophy?

A. Various sciences treat of the human body, such as anatomy, physiology, etc.; but in philosophy we must treat of the human body in relation to that which is first and supreme in it, because philosophy treats of things according to their supreme causes. Now, that which is supreme in the body is its relation to the soul with which it is united and which it serves; hence we shall say a few things respecting this relation and aptitude. 1. *The human body is the most perfect of all living bodies in consequence of this relation to the soul.* In the universe there is a wonderful connection among beings. We find always that that which is the least and most inferior element of a supreme genus touches the boundaries of that which is the supreme part of an inferior genus. This is clearly seen in the genus *animal*. The least of this genus, like the mollusks, which have barely the sense of touch and are affixed to the earth like plants, touch the confines of the supreme one of the inferior genus, *living* or plant, such as the polypus and the corals. According to this theory, therefore, we must admit, in the genus of corporal things, bodies superior to all others and more noble, such as touch on the boundaries of the least among spiritual things, and that is the human body; therefore the human body is the most perfect and noble of all living bodies.

“Look nature through ; 'tis neat gradation all.
By what minute degrees her scale ascends !
Each middle nature joined at each extreme,
To that above joined, to that beneath :
Parts into parts reciprocally shot
Abhor divorce ; what love of union reigns !
Here dormant matter waits a call to life ;
Half life, half death, joined there. Here life and sense ;
There sense from reason steals a glimmering ray :
Reason shines in man.”

—YOUNG.

Q. In what does this perfection consist ?

A. In the greatest possible variety of organs. Because the body is made for the soul. Now, the soul stands in need of the body for this reason, that, not possessing truth in itself, it must acquire it from sensible objects ; hence the necessity of the senses and of the faculty of feeling. But the operation of feeling cannot be performed without corporal organs ; hence the need of corporal organs ; and as the faculty of feeling is manifold, various, therefore must be the organs of feeling. But all these organs must be subject to a general organ most exquisitely made, in order that it may feel different and contrary sensations and bring them to unity. This common and general sense is the *touch*. Of these senses, and especially of the touch, we shall speak in the second part of Anthropology. We conclude for the present that the human body is superior to all living bodies, because no other can feel so exquisitely and so delicately as the human body, and because of the variety of its organs, superior in their nature, structure, uses, and functions to those of all other living bodies.

CHAPTER IV.

OF THE MANNER ACCORDING TO WHICH THE SOUL AND
THE BODY ARE UNITED TOGETHER AND CONSPIRE TO
FORM MAN.

ARTICLE FIRST.

*Union of the Body and Soul as to Being—Seat of the
Soul.*

Q. Under how many aspects may we consider the union of the soul and the body?

A. Under two aspects: the soul is united to the body as to *being* and as to *action*. As to being, we have seen that both soul and body form one complete substance, that both substances, the body and the soul, meet together in one single subsistence—that of the soul—so that the soul causes the body to have actual reality and existence. Hence the soul has been called the living and substantial form, or the actuality of the body. Of this we have spoken before, but closely connected with the present topic is the question of the seat of the soul. Since the soul is the living form of the body, it must be somewhere in the body. But where? Philosophers have answered this question in different ways. Descartes held that the seat of the soul was in the pineal gland, whence, as upon a throne, it gives direction and movement to the whole machine. A poet has wittily expressed this opinion as follows:

“*Alma*, they strenuously maintain,
Sits cock-horse on her throne, the brain,

And from that seat of thought dispenses
Her sovereign pleasure to the senses.
Two *optic* nerves they say she ties
Like spectacles across the eyes,
By which the spirits bring her word
Whene'er the balls are fixed or stirred. . . .
Wise nature likewise, they suppose,
Has drawn two conduits down our nose ;
Could *Alma* else with judgment tell
When cabbage stinks or roses smell ?
By nerves about our palate placed
She likewise judges of the taste ;
Else (dismal thought !) our warlike men
Might drink thick port for fine champagne.
Hence, too, that she might better hear,
She sets a drum at either ear,
And loud or gentle, harsh or sweet,
Are but th' *alarums* which they beat.
Last, to enjoy her sense of feeling
(A thing she most delights to deal in),
A thousand little nerves she sends
Quite to our toes and fingers' ends ;
And these in gratitude again
Return their spirits to the brain,
In which their figure being printed
(As just before I think I hinted),
Alma informed can try the case,
As she had been upon the place."

—PRIOR, *Alma*.

Others maintain that the soul is in the heart, and others in some other part of the body.

Now, all these opinions which locate the soul in a particular part of the body are necessarily false, because you can locate, enclose, surround, circumscribe, bound off only that which is extended, as that which is extended, having parts, can be surrounded by corresponding parts of another body. That which is simple cannot be surrounded, not having parts which can be circumscribed by parts of a body. Hence those who locate the soul in a particular part of the

body and enclose it therein have been rightly accused of making the soul material.

The true opinion is that the soul is whole and entire in the whole body, and whole and entire in each part of the body. This doctrine of the Christian schools of the Middle Ages has been cried down by modern wiseacres; but reason is on the side of the Christian schools. In order to illustrate and prove the scholastic doctrine we must recall a few principles:

1. That the soul is simple and cannot be divided into parts.

2. That simple things abide in a place not by contact of extension but contact of action.* We say that a thing is in space by contact of extension when the parts of this thing are located in, and put in juxtaposition with, the corresponding part of space. If I lay a book on the table, the different parts forming the extension of the book touch the corresponding parts of the table. The book, therefore, is on the table by contact of extension. Now, when a thing is simple and has no parts, it is evident that it cannot be in a place by contact of extension, when this very extension is wanting to it; it can only be in a place by acting upon or in it. Having recalled these principles, it is easy to demonstrate our thesis.

1. Incorporal things are said to be in space not by contact of extension but by contact of action. But the soul acts in the whole body; therefore the soul is in the whole body.

2. The soul is the substantial form of the body, inasmuch as it makes it real and living; therefore the soul is in the whole body.

* "Incorporalia non sunt in loco per contactum quantitatis, sed per contactum virtutis."—ST. THOMAS.

3. Demonstration that the soul is whole and entire in each part of the body.

The soul acts not only in the whole body but also in each part of the body. Now, if it were not whole and entire in each part of the body, it would have to divide itself and be part in one part of the body and part in another. But this is impossible, because the soul is simple; therefore the soul is whole and entire in each part of the body.

Q. Please to illustrate this point by analogy.

A. Great opposition has been raised against this doctrine because persons want to see this truth by imagination; by figuring to themselves how can it be that a being is whole and entire in the whole and in each part of the body, forgetting that we cannot form any sensible image of a spiritual fact. Yet, to enable the student to perceive this truth, we shall make use of some comparisons. Take, for instance, light. Light, apparently, is in the air in the same manner as the soul is in the body. First, it penetrates the whole air through and impregnates it with its beams; secondly, it seems to be whole and entire in each particle of air. This is gathered from two facts: first, when air is divided light remains whole and entire, as in each particle of air the same amount of light is seen; secondly, when air becomes foul and corrupted light continues always pure.

“ But as the fair and cheerful morning light
Doth here and there her silver beams impart,
And in an instant doth herself unite
To the transparent air in all and every part—
Still resting whole when blows the air divide,
Abiding pure when th’ air is most corrupted ;
Throughout the air her beams dispersing wide,
And when the air is tossed not interrupted—

So doth the piercing soul the body fill,
 Being all in all, and all in part diffus'd ;
 Indivisible, incorruptible still,
 Nor forc'd, encounter'd, troubled, or confused."

—DAVIES.

Take another instance. An orator is speaking before a large audience ; he develops his subject with the greatest force and earnestness, and his audience are enlightened and carried away with enthusiasm. His voice, which is but a sound, is divided, each one of the audience receiving more or less ; those who are nearest to the orator receiving a stronger sound, those furthest from him the least sound—each, in one word, receiving a varied quantity of sound. But thought is indivisible, and each one of the hearers receives it whole and entire, all equally, those who sit near as well as those who are afar. Because thought—that is, that which is spiritual—is indivisible ; wherever it penetrates it must penetrate whole and entire ; wherever a spirit exists it must exist whole and entire. It is the same of the soul, which is a spirit. It communicates itself to all the parts of the body, it lives in each of them, and wherever it is it must be whole and entire.

Take another example. My mind develops a thought, and after this one another thought, and then another, and so on, a great number of thoughts following one another, agreeing with one another or clashing with one another. In each of these thoughts, in each of these intellectual acts, my mind is whole and entire ; and yet it differs in each one of them, being sometimes right, sometimes wrong, sometimes false, other times true ; in other words, my intelligence manifests itself in different ways, though it is whole and entire in each. Now, the same must be said of the soul. It acts in one way in one organ, and in another

organ in another way, but in every act and in every mode of acting it is itself which acts, and itself whole and entire; it is its activity which appears in all these different modes.

ARTICLE SECOND.

Of the Union of the Soul and Body as to Action.

Q. Is there a union of the body and soul as to action?

A. That there should be a union and a mutual correspondence of action between two beings, one of which subsists on the subsistence of the other, is evident from reason and is confirmed by experience. For we know by experience that, given certain thoughts and feelings of the soul, certain corresponding movements result in the body; and, *vice versâ*, given a certain state of the body, a corresponding state manifests itself in the soul. This mutual correspondence between the soul and the body as to their action has been called communication or *commercium*.

Q. How is this communication between the soul and the body explained?

A. Various systems have been invented to explain this mutual influence of the soul over the body, and *vice versâ*, but they may be reduced to five: *occasionalism*, *pre-established harmony*, *plastic mediatorship*, *physical influx*, and *substantial union*.

Q. Explain and give your opinion of the first system.

A. It was taught by Malebranche, who started from a principle of his own, that in the universe there are no efficient causes and that God alone does everything. From this principle he concluded that neither the soul can really act upon the body nor the latter on the soul, as neither of them can be real agents.

Against this doctrine the opponents of Malebranche said: If what you say is true, if God alone acts in every being, and consequently neither the soul can act upon the body nor the body upon the soul, how do you explain that harmony and correspondence which exists between the soul and the body?—for when certain thoughts and feelings arise in the soul, a corresponding movement succeeds in the body, and *vice versa*. Suppose a man has received an insult, which just at this moment has come to his knowledge, and which has put his soul in a fierce rage; do we not see corresponding movements in the body, the eye shooting fire, the face becoming first blanched and then crimson, the lips compressed, the hand clenched, and the utterance interrupted? How do you explain this? How do I explain it? says our philosopher. Nothing easier. I have said that God is the sole agent, and I cling to that, and explain that correspondence of thoughts and movements by saying that God takes occasion from that modification of the soul to excite a corresponding movement in the body. Hence the thoughts and feelings of the soul are mere occasions which God takes to act upon the body, and *vice versa*. This system is therefore called *occasionalism*, or the system of *occasional causes*.

Now, we may remark upon this system: 1. That it is founded on the assumption that there can be no real efficient causes in the universe besides God, from which principle Malebranche deduces that whatever happens either in the soul or in the body must be effected by God. But we have shown in Ontology that this principle is false. Therefore the system raised upon it is false.

2. This system destroys the substantial union between the soul and the body. Because what kind of

union can there exist between two machines, if the engineer alone is the agent who produces similar movements in both independently of either, and without the least communication between them?

Q. Explain the second system.

A. Leibnitz admitted that finite beings can be real agents, but denied that the action can pass from one to another, and therefore arrived by another road at the same conclusion as Malebranche. The latter denied that the soul and the body could act upon each other, on the principle that they are not real agents. Leibnitz denied that they can act upon each other, because the action of one cannot pass over to the other. Hence the same objection was made against Leibnitz: How do you account for the harmony between the actions of the soul and the movements of the body, and *vice versâ*? How do I account for it? Thus: All you have to do is to suppose that each being of the universe is a simple substance called a *monad*, and that each of these *monads* is a representative force and can represent all that which happens in the universe; that God has established among all these *monads* a parallelism of perceptions, of wishes, of actions, and motions in such a manner that without communicating anything to each other they all move in a most perfect harmony, each one representing what the other does and suffers. So that in our case, the soul being a representative force, and the body being also a representative force, God has established such a parallelism between them that in proportion as perceptions, wishes, and actions are developed in the soul they are immediately represented by corresponding movements in the body, and *vice versâ*. This system is called pre-established harmony.

Now, we observe that this system, though eminently

ingenious, is false for the following reasons: 1. Because it is founded on the principle that transient actions are impossible. For this is the fundamental principle of the whole system of Leibnitz: as the action of one agent cannot be communicated to another, it follows that the interchange of modifications between the body and the soul are effected by a pre-established harmony of affections and movements. Now, we have shown this principle to be false; false, therefore, is the system which rests upon it.

2. This system destroys altogether the substantial union which we have proved to exist between the body and the soul. But this substantial union is admitted even by Leibnitz; therefore his system is false. That Leibnitz admits a substantial union between the body and the soul is evident from these words of his *Theodicea*: "There exists between the soul and the body a true union, from which results the suppositum." On the other hand, there can be no doubt that the system of Leibnitz destroys the substantial union between the body and the soul. Because whence would this union result, if the soul cannot act upon the body, nor the body upon the soul? Nay, instead of finding any substantial union between the soul and the body in the system we are refuting, we could not even discover between these two terms a collective union such as would exist between the different parts of a machine. The system of Leibnitz, therefore, is false.

Finally, in this system and in the other God would be the author of all the errors, crimes, and disorders which occur and are perpetrated among men.

Q. What is the third system?

A. To obviate the difficulties which are brought forward against occasionalism and pre-established har-

mony, John Clerc hit upon a new expedient: You say the body cannot act upon the soul; I grant that. You insist that the soul cannot have any influence upon the body; I admit that also. Therefore to render possible this apparent mutual communication and interchange of actions between the soul and the body, all you have to do is to suppose a third substance intermediate between the soul and the body. The soul gives its commands to this intermediate substance, and this transmits them to the body; the body communicates its sensations to this medium, and it humbly transfers them to the soul. This intermediate substance between the soul and the body was called the *plastic mediator*.

Q. What do you think of this system?

A. That it is even more absurd than the two former ones. 1. What is this third substance? Is it a spirit or a body? If it be said that it is neither the one nor the other, but something partaking of both natures—something between the spiritual and the corporal—we say that such a thing is a contradiction.

2. This system destroys also the substantial union between the body and the soul; for in what does this union consist? It does not consist in two things being brought together by means of a third, but its nature lies exactly in the fact that two substances meet together directly, touching each other, so to speak, by means of the subsistence of one of those substances. Now, if we explained the communication of the body and the soul by means of a third substance, partaking of the nature of both, we should have to suppose that the body and soul do not meet directly together, that the two substances do not touch each other; therefore, by admitting a plastic mediator to explain the communication between the

soul and the body, we would destroy their substantial union.

Q. What is the next system?

A. Physical influx, invented by Eulerus and held by all the followers of Locke. This system explains the union between the soul and the body by means of the mutual action of one upon the other. The body incites and induces the soul to choose those perceptions and those acts which correspond to its organic movements, and on the other hand the soul moves and induces the body to make such movements as are agreeable and befitting to the soul's perceptions and acts. In this real and mutual influence of the soul upon the body, and of the body upon the soul, lie the union and communication between the two; hence the system is called *physical influx*.

Q. What do you think of such a system?

A. Though this system avoids the error of Malebranche that there are no efficient causes besides God, and that of Leibnitz that an action cannot pass from an agent to an object acted upon, and though it rejects the plastic mediator, yet we cannot admit it for the following reasons:

1. Because it destroys the substantial union between the soul and the body. For, according to this system, the union between the soul and the body is explained as follows: the body acts upon the soul and incites it to have perceptions and to elicit acts, and the soul, in its turn, incites the body to movement; therefore in this system the body and the soul are two separate beings, and do not form one complete substance, but are two complete substances accidentally united in order that one may act upon the other. But this implies that there is no substantial union between the soul and the body; therefore this system

destroys the substantial union between the soul and the body.

2. In this system it is said that the body acts upon the soul. Then it acts without the soul; because how could it otherwise be said that it acts upon the soul? But if it acts without the soul, then what gives it movement, since no body can produce movement except it be moved by some other agent? Therefore this system leads to absurdities.

In one word, in the examination of all these systems we ought to keep carefully in view the theories already established. Man's nature results from the substantial union between the body and the soul. If we deny this union, or do not carefully describe its exact nature, we destroy man's nature and necessarily fall into absurdities. Now, in all the aforesaid systems we fail to observe that this substantial union between the soul and the body is maintained. Therefore they destroy man's nature and lead to many errors.

Q. What is the true system about the union between the soul and the body?

A. The system of the schoolmen, which may be formulated in a few words, as follows: If the soul be the subsisting principle of the body, as we have demonstrated, or, in other words, if the soul be the living, substantial form of the body, it follows that the soul must necessarily act upon the body, and that the movements of the body should be felt in the soul.

We prove this system as follows:

The operation of anything emanates from its subsistence. But the body receives its subsistence from the soul; therefore it must receive from the soul the power of acting. Now, if the soul be the principle from which the body derives the power of acting, it

is necessary also that the soul, along with the body, should be the subject of those powers by means of which the body acts. And if not the body alone, but the whole composite—that is, the body and the soul—is the subject of all the bodily powers, it follows necessarily that not only the soul should be able to incite the members of the body to operation, but also that the operations of the body should be felt in the soul.

For the sake of clearness we shall put the same argument in another form. We have proved that the body subsists on the subsistence of the soul. Now, what does this imply? Does it imply that the body has no radical power to act without the soul? Certainly not; the body is a substance, and, as such, has a natural radical power of acting. But, admitting this radical natural power of acting, does it follow that the body can actually and really act without the soul? Certainly not; because *actiones sunt suppositorum*. Action implies subsistence, which is that last complement of a being which causes it to be distinct from others, independent of and incommunicable to others. Without that a substance is an abstract thing and not a reality—a potentiality, but not an actual existence. Now, the body has no subsistence of its own, but subsists on the subsistence of the soul; therefore it really receives the power of acting from the soul. The soul, then, is the principle from which the body derives the power to act. Now, the consequence which results from this truth is that the soul, along with the body, must be the subject of those powers by means of which the body acts, because originally the power emanates from the soul; those powers, therefore, by which the body acts must be in both. But if the whole composite—that is, the body and the soul—is

the subject of those powers by which the body acts, who can fail to see the consequence that not only the soul must be able to move the body to act, but that the movements of the body should be felt in the soul? In one word, the body subsists on the subsistence of the soul; therefore it receives the power to act from the soul. If this power of the body is received from the soul, it follows that it must be found in both conjointly, and that, consequently, not only the soul must be able to move the body, but it must feel somewhat the movements of the body.

Q. Give a résumé of all we have said in this first part of Anthropology.

A. We have treated of man's nature, and to treat of it accurately we have considered it first in general, and then we have distinguished those elements from which it results—soul and body; then we have considered each element in particular; and, finally, we have investigated the manner in which these elements are united together. In other words: Two things are necessary to constitute man—1, body and soul; 2, a substantial union between the two; therefore, to speak of man properly, it was necessary to consider two things—his body and soul, and the substantial union of both. This we have done in two ways, first in general, and then in particular. And with this we end the first part of Anthropology.

“O ignorant man! what dost thou bear

Lock'd up within the casket of thy breast?

What jewels and what riches hast thou there,

What heavenly treasures in so weak a chest?

Look in thy soul, and thou shalt beauties find

Like those which drown'd Narcissus in the flood:

Honor and pleasure both are in the mind,

And all that in the world is counted good.

Think of her worth, and think that God did mean
This worthy mind should worthy things embrace.
Blot not her beauties with thy thoughts unclean,
Nor her dishonor with thy passions base.
And when thou thinkest of her eternity,
Think not that death against her nature is,
Think it a birth ; and, when thou go'st to die,
Sing like a man as if thou went'st to bliss."

—DAVIES.



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